Daniel T.L. Shek
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Development and Evaluation of Positive Adolescent Training through Holistic Social Programs (P.A.T.H.S.)

Springer

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Volume 3

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Daniel T.L. Shek • Rachel C.F. Sun

Editors

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Preface

Adolescent risk behavior is growing in different parts of the world. Adolescent developmental problems, such as mental disorders, suicide, substance abuse, violence, nonengagement, and unemployment, are thorny matters that confront parents, educators, youth workers, and public policy makers. Besides the basic question of how adolescent developmental problems can be reduced (i.e., pathological focus), the question of how holistic development in adolescents can be promoted (i.e., developmental focus) is also raised by professionals who are concerned about adolescent development.

To reduce adolescent developmental problems, one common formula accepted by prevention scientists, pediatricians, psychologists, social workers, and allied professionals is to weaken the harmful effects of risk factors and to strengthen the beneficial effects of protective factors surrounding adolescent development. As far as protective factors are concerned, promotion of psychosocial competencies, such as the development of resilience and positive identity, is focused upon. Actually, the emphasis on the promotion of inner strengths and resources in young people is the cornerstone of the movement on positive youth development. At the same time, the focus on the importance of inner strengths of young people is consistent with the Chinese notion of "gu ben pei yuan," which means the consolidation of inner foundation and strengthening of the inner strengths.

In the era of evidence-based practice, policy makers, service providers, and the general public are asking one simple but important question: Do we have evidence-based positive youth development or preventive programs targeting adolescent holistic development and risk behavior? In North America, effective programs have been developed to promote the psychosocial competencies of young people in the past few decades, which in turn have been effective in promoting adolescent holistic development and reducing adolescent risk behavior. Organizations such as Collaborative for Academic, Social, and Emotional Learning (CASEL) and the Search Institute have been established to promote holistic development in young people. Besides, databases such as the National Registry of Effective Programs and Practices (NREPP) of the Substance Abuse and Mental Health Services

Administration (SAMHSA) have been set up to document effective adolescent prevention programs.

In different Chinese communities including Hong Kong, the plain truth is that there is a severe lack of evidence-based adolescent development and preventive programs. Systematic and longitudinal evaluation programs are lacking and the standard of proof in most of the existing programs is very low. Besides, there is also no credible indigenous database on effective adolescent prevention and positive youth development programs. Against the above background, The Hong Kong Jockey Club Charities Trust initiated a youth enhancement program entitled "P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme," in 2004, with an initial earmarked grant of HK$400 million and an additional grant of HK$350 million for the extension phase. The word "P.A.T.H.S." denotes Positive Adolescent Training through Holistic Social Programmes. The Trust invited academics of five universities in Hong Kong to form a research team with The Hong Kong Polytechnic University as the lead institution to develop a multiyear universal positive youth development program to promote holistic adolescent development in Hong Kong.

There are several unique characteristics of the Project P.A.T.H.S. in Hong Kong. First, it is the first large-scale positive youth development program in Hong Kong and other Chinese communities, hence making it a pioneer and an innovative project. Second, it provides 60 h of universal training on positive youth development in the junior secondary school years utilizing the constructs identified in the successful programs. Third, it includes both universal and selective programs (i.e., primary and secondary prevention programs). Fourth, it includes the development of a multiyear positive youth development program, the provision of training on a massive scale, and the implementation of rigorous evaluation. Fifth, it involves the collaboration of five universities, different government departments, NGOs providing school social work service, and the education sector. Sixth, a substantial amount of research grant was earmarked for the initial phase and extension phase of the project. Finally, it utilizes longitudinal evaluation over a long period of time involving the collection of different data from different sources.

When we designed the Project P.A.T.H.S. in 2004, a rigorous evaluation component was included in the project. In particular, a 5-year longitudinal evaluation component was planned (2006/07 to 2010/11 school years). Throughout the years, evaluation based on multiple evaluation strategies clearly showed that students who joined the program had better development and lower risk behaviors than did students who did not join; the program and different stakeholders also had positive views of the program, workers, and benefits of the program.

As one important feature of evidence-based practice is the systematic documentation of the intervention and evaluation, it is our great pleasure to write this book which outlines the background, design, implementation, evaluation, and implications of the Project P.A.T.H.S. In chapters "Adolescent Developmental Issues in Hong Kong: Phenomena and Implications for Youth Service" and "Conceptual Framework Underlying the Development of a Positive Youth Development Program in Hong Kong", adolescent developmental issues are outlined and positive youth development as a promising strategy to promote adolescent development is presented.

In chapters "Development of a Positive Youth Development Program in Hong Kong" and "Evaluation of the Project P.A.T.H.S. Using Multiple Evaluation Strategies", the curriculum framework and evaluation design are outlined. In chapters "Objective Outcome Evaluation of the Project P.A.T.H.S.: Longitudinal Study Based on Indicators of Positive Youth Development" and "Impact of the Project P.A.T.H.S. on Adolescent Risk Behavior: A Five-Year Longitudinal Study", objective outcome evaluation findings of the project are presented. In chapters "Subjective Outcome Evaluation Based on the Program Participants: Does Dosage Matter?", "Subjective Outcome Evaluation Based on the Perceptions of the Program Implementers", and "Subjective Outcome Evaluation of the Project P.A.T.H.S.: Secondary Analyses of the Qualitative Data Collected from Program Implementers", subjective outcome findings based on program implementers and participants and related secondary data analyses are discussed. For interim evaluation findings, they are presented in chapter "Interim Evaluation of Project P.A.T.H.S.: An Integration of Findings Based on Program Implementers". In chapters "Qualitative Evaluation of the Project P.A.T.H.S.: Narrative Findings Based on Focus Groups with Participating Students" and "Qualitative Findings Derived from Focus Groups Based on the Program Implementers", evaluation findings based on focus groups of program implementers and participants are highlighted. In chapters "Evaluation Based on Weekly Diaries Written by the Students", "Evaluation Based on Personal Construct Psychology: Findings Based on the Repertory Grid Test", and "Process Evaluation of the Project P.A.T.H.S. in Hong Kong", evaluation based on diaries, systematic observations in process evaluation, and repertory grid technique are presented. In chapter "Using Different Programs to Help Adolescents with Greater Psychosocial Needs", evaluation findings based on the Tier 2 Program are presented. In chapter "Lessons Learned, Emergent Issues, and Future Directions", conclusions based on evaluation studies of the project and future research directions are presented. In the last three chapters, the impacts and implications of the project are discussed. In chapter "Development of a Positive Youth Development Subject in a University Context", a "university version" of the Project P.A.T.H.S. at The Hong Kong Polytechnic University is presented. In chapter "Impact of the Project P.A.T.H.S. in China", the transplant of the program in a project supported by Tin Ka Ping Foundation in East China is described. Finally, the insight of the project to evidence-based work youth in the Chinese contexts is described in chapter "Evidence-Based Positive Youth Development Programs: Insights from the Project P.A.T.H.S.".

Based on the experiences from the past years, there are several things that we would like to share with the readers of this book. First, despite the difficulties we encountered, many challenging tasks were accomplished in the past 8 years. When we looked back, we actually faced many challenges and much hardship in the initial months of the project. Externally, resentment and hostility from the education and welfare sectors were great challenges. Internally, manpower conflicts and unexpected disappearance of some members of the research team created many extra burdens. Nevertheless, the challenges and difficulties at the initial stage facilitated the development of our resilience, forgiveness, and spirituality (i.e., "positive researcher development"). At the same time, we have also witnessed the joy and positive

development of students and workers who have joined the project. In these 8 years, we successfully developed the Tier 1 Program, trained 7,356 teachers and social workers, implemented the program in more than 280 schools with the participation of more than 210,000 students, and conducted many evaluation studies based on different strategies. To sum up, we have successfully achieved (and overachieved) the original research objectives.

Second, evaluation findings consistently suggested that the Tier 1 Program was able to promote the holistic development and reduce adolescent risk behavior in junior secondary school students in Hong Kong. The positive impact of the project was also recognized by international academic and professional communities. Research articles based on the project have been published in high-impact journals such as *Research on Social Work Practice* (Q1 journal in Social Science Citation Index), *The Scientific World Journal* (Q1 journal in the Science Citation Index), and the *Lancet*.

Third, the Tier 1 Program has been piloted outside Hong Kong, including Shanghai, East China, Macau, and Singapore. We have already started a project supported by the Tin Ka Ping Foundation in East China (Shangai, Suzhou, Yangzhou, and Changzhou) with excellent evaluation findings in the first year. The project has also been launched in the secondary school affiliated to Renmin University (Ren Da Fu Zhong) in Beijing. At The Hong Kong Polytechnic University, a "university version" of P.A.T.H.S. has been developed which is taken by 2,100+ students in the 2012/2013 school year.

Fourth, in the past 8 years, it is our honor and privilege to walk together with many dedicated colleagues who are passionate about the development of young people in Hong Kong. As we always share with our colleagues, the Project P.A.T.H.S. will never be successful without the dedication and commitment of frontline teachers, social workers, and administrators. It is indeed our privilege to work with many committed, dedicated, and loyal souls in this project. Special thanks must go to these "comrades" who have made valuable contribution to the project.

Fifth, we wish to take this opportunity to express our deepest thanks to The Hong Kong Jockey Club Charities Trust for its vision in initiating this groundbreaking project. Without the initiation of the project by The Hong Kong Jockey Club Charities Trust, this project would never exist in Hong Kong. The unfailing support and passion about young people in Hong Kong of colleagues of the Trust are also engraved in our hearts.

Sixth, we thank God for the joy, tears, grace, and blessings we have had in this project. One example we often cite is that in the 603 days of training days in the past 8 years, only 3 days required rescheduling because of bad weather. To me, the whole project is a miracle.

Finally, how the positive findings in this project can be translated to regular programs in the school and community contexts is a challenging question for academics, researchers, and policy makers. While no school administrator would dispute the fact that psychosocial competencies are important for youth development, whether time from the formal curriculum would be allocated to formal lessons on positive youth development is another concern. We desperately need a paradigm

shift in the mind-set of educators, parents, and adolescents themselves in seeing psychosocial competencies as important as intellectual competencies in students. As Hong Kong is a place with strong examination orientation, how to emphasize holistic development in young people is an important task to learn.

This book is unique in three ways. First, it takes positive youth development seriously. It is our firm belief that through strengthening psychosocial competencies of young people, they will develop in a holistic and healthy manner. As such, the conceptual framework of the curriculum materials underlying the Project P.A.T.H.S. is based on 15 positive youth development constructs identified from successful programs in the literature. Second, different evaluation mechanisms that can be possibly used to evaluate positive youth development programs are presented. Such materials are important for researchers and students in different disciplines, including social work, education, psychology, sociology, and youth work. In particular, the book is a good research textbook for research methods in human services. Finally, the insights of the project to university students and young people in other parts of China as well as evidence-based youth work are presented.

It is our humble wish that as a small step, the project will benefit more Chinese young people so that they will grow in a holistic manner. Chinese young people constitute roughly one-fifth of the world's young people population. Obviously, much more work should be conducted to develop positive youth development programs and to evaluate their impacts in different Chinese communities.

Daniel T.L. Shek
Rachel C.F. Sun

Contents

Adolescent Developmental Issues in Hong Kong: Phenomena and Implications for Youth Service

Daniel T.L. Shek and Janet T.Y. Leung

Introduction

Children and adolescents are the backbone of Hong Kong's future. Though there are many social issues (such as aging, housing needs) that catch the attention of the Hong Kong Government, the public expenditure spent on education and youth service has never been reduced. In 2010–2011, the Hong Kong Government spent HK$60,719 million on education, which constituted 19 % of total recurrent public expenditure, and was ranked first among various policy areas. The estimated expenditure rose to HK$68,274 million in 2011–2012, with an annual increase of 12.4 % (Information Services Department, HKSAR, 2012). Moreover, the expenditure on youth service provision was HK$1531.3 million in 2010–2011, totaling 14.7 % of the actual expenditure on social welfare. The estimated expenditure rose to HK$1666.8 million in 2011–2012, with an annual increase of 8.8 % (Social Welfare Department, HKSAR, 2012). Though a large amount of public spending has been invested for children and adolescents in Hong Kong, youth problems have never been reduced.

Building upon previous work (e.g., Shek, Ma, & Sun, 2011), several adolescent developmental issues in Hong Kong are examined in this chapter. They include adolescent substance abuse, Internet addiction, materialistic orientation and problematic concept of money, worrying adolescent sexual issues, bullying, adolescent

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poverty, and youth unemployment and reduced income. An overview of these adolescent developmental issues provides important pointers for the development of adolescent prevention and positive youth development programs.

Adolescent Substance Abuse

An examination of the substance abusers figures reported to the Central Registry of Drug Abuse (CRDA) monitored by the Narcotics Division of the Government showed that there were two peaks of substance abuse in the past 10 years. The first peak was in the early 2000s which was contributed by the rave party culture. The second peak happened in 2008–2009 when ketamine abuse was spreading rapidly in schools. It was found that young people under the age of 21 who have abused drugs rose from 2,278 in 2005 to 3,387 in 2009, though there was a drop to 2,953 in 2010, which continued in 2011. The percentage of adolescent drug abusers among all reported drug abusers increased from 14.0 % in 2003 to 24.4 % in 2008, with a slight decrease to 22.4 % in 2010. Among the adolescent drug abusers, ketamine, methylamphetamine (ice), and cocaine abusers rose rapidly (Narcotics Division, 2011). From the analyses of the drug-abuse statistics and trends, there are four main concerns: (1) growing prevalence of psychotropic substance abuse, (2) decrease in age of first drug taking, (3) difficulties in identification of drug abusers, and (4) perceptions of taking psychotropic substance.

The prevalence of psychotropic substance abuse sounds an alarm on the social problems in Hong Kong. According to the 2008/2009 Survey of Drug Use among Students conducted by Narcotics Division (2010), the lifetime prevalence rates among different student groups were 1.6 % for upper primary school students, 4.3 % for secondary school students, 2.9 % for undergraduate students, and 5.4 % for other postsecondary school students. Regarding students who had taken drugs within 1 year, the prevalence rates were 0.8 % for upper primary school students, 2.6 % for secondary school students, 1.3 % for undergraduate students, and 2.1 % for postsecondary students.

The cheap price of drugs constitutes one of the factors contributing to the rising prevalence of psychotropic substance abuse. For example, 61.6 % of drug-taking secondary students claimed that the drugs they took were "free of charge" (Narcotics Division, 2010). The easy accessibility of drugs also facilitates drug prevalence. A high proportion of drug-taking students obtained their drugs from friends (42.5 %), schoolmates (20.3 %), and siblings (19.0 %) (Narcotics Division, 2010).

Regarding the age of first drug taking, it was found that 38.0 % of reported drug abusers claimed that they started drug abuse at an age between 12 and 15 (Narcotics Division, 2011). Moreover, according to the 2008/2009 Survey of Drug Use among Students (Narcotics Division, 2010), it was found that 14 % of the drug-taking students took drugs when they were 10 years old or even younger. The findings are alarming as children are more ignorant of the harmful effects of drugs and they do not have strong refusal skills regarding drug taking.

Another concern is that it is difficult to identify drug abusers. From the statistics of Central Registry of Drug Abusers in 2010 (Narcotics Division, 2011), 75.1 % of drug abusers aged under 21 reported to have taken drugs at home and/or at a friend's home. According to 2008/2009 Survey of Drug Use among Students (Narcotics Division, 2010), the top three venues for taking drugs were "friend's/schoolmate's/ neighbor's home" (36.2 %), "karaoke/disco" (25.1 %), and "students' own home" (25.0 %). The hidden nature of adolescents' drug taking makes the identification of the drug abusers more difficult. Moreover, with the convenience of traveling between Hong Kong and Shenzhen in Mainland China, cross-border adolescent substance abuse has become very popular (Narcotics Division, 2010). The use of electronic home-return permits further facilitates the cross-border substance abuse, as adolescents can easily go to Shenzhen to abuse drugs without leaving any trace in their travel documents (Shek et al., 2011).

Last but not least, the prevalence of psychotropic substance abuse mirrors the rising belief among teenagers that psychotropic substance abuse is a life choice instead of an addictive behavior (Shek et al., 2011). According to 2008/2009 Survey of Drug Use among Students (Narcotics Division, 2010), 20.7 % of drug-taking students agreed that using drug was trendy, and 30.7 % agreed that taking psychotropic substances was a hobby nowadays similar to smoking.

Internet Addiction

With advances in technological development, Internet usage becomes essential and popular in our daily life. But at the same time, Internet addiction constitutes another adolescent developmental issue in Hong Kong. Internet addiction generally refers to the phenomenon that an individual fails to control his/her use of the Internet and the use of Internet causes distress and dysfunction in his/her daily life (Young, 1999). A prevalence study of Internet addiction among 976 students using the Young's 20-item questionnaire identified that 61.4 % of senior primary school students, 35.2 % of junior secondary students, 18.8 % of Secondary 4 and Secondary 5 students, 35.8 % of Secondary 6 and Secondary 7 students, and 37.0 % of college students were highly at risk of Internet addiction (Tsuen Wan Centre and Chinese YMCA of Hong Kong, 2004). Another study of 6,121 Chinese primary and secondary school students examining their Internet addiction behaviors in Hong Kong using assessment frameworks of Ivan Goldberg and Kimberly Young revealed that there were around one-fifth (22.9 %) of the respondents classified as Internet addicted (Shek, Tang, & Lo, 2008). A study examining the Internet addiction behaviors of 3,328 Hong Kong adolescents in two waves identified more than one-fourth (26.7 and 26.4 %, respectively) of the respondents as Internet addicted (Shek & Yu, 2012). Furthermore, it was found that those students who met the criterion of Internet addiction at Wave 1 were 7.55 times more likely to be identified as Internet addicts at Wave 2. The findings suggest that the prevalence of adolescent Internet addiction is alarming.

There is evidence showing that Internet addiction brings negative consequences into physical, psychological, academic, occupational, and relational aspects (Shek, Sun, & Yu, 2012). In the physical aspect, sleep patterns are typically disrupted due to the late-night log-ins and long hours of Internet use. The sleep disturbance may cause excessive fatigue during daytime that may affect the individual's normal functioning. Other physical hamperings include a weakening of one's immune system, an increased risk for carpal tunnel syndrome, back strain, or eyestrain (Young, 1999). Psychologically, it was found that there were higher levels of depression and suicidal ideation, neuroticism and psychoticism, conduct problems, hyperactivity, and lower prosocial behaviors in Internet-addicted adolescents than non-Internet-addicted adolescents (Cao & So, 2006; Kim et al., 2006). In addition, Internet addicts may excessively imitate the behaviors and values of the characters of the online games (Shek et al., 2012). Internet misuse also led to serious problems in the academic and occupational performance of adolescents and youth. There was a decline in study habits, drop in academic results, decrease in employee's productivity, and job suspension and termination (Chou & Hsiao, 2000; Young, 1999). Last but not least, Internet addiction hampered parent-child relationship, relationship with teachers, development of close friendship, and dating relationships (Yang & Tung, 2007; Young, 1999). It was found that family relationships were seriously disrupted when there was a decrease in time spent with the family, reluctance to perform family roles and duties, and increase in conflicts with parents about the time spent on the Internet (Shek et al., 2012).

Materialistic Orientation and Problematic Concept of Money

Hong Kong is a metropolitan city with rapid economic growth. Adolescents are nurtured in an environment with material prosperity. Unfortunately, overemphasis of money and material possession becomes one of the issues for adolescents. In a study on "quick-money making" conducted by the Hong Kong Federation of Youth Groups (2007), 56.8 % of the youth agreed that "Hong Kong is a place where one can easily make quick money." A significant proportion of youth admired those who could make quick money (29.8 %) and agreed that making quick money nowadays meant that he/she was smart (27.7 %). The findings further suggested that they perceived stocks (41.9 %) and warrants (26.7 %) purchase as the first two feasible ways of gaining quick money.

It is even more worrying when adolescents use unethical or illegal means to achieve their wealth. One current social phenomenon that draws the attention of social workers is the practice of compensated dating by teenage girls. In a study conducted by The Hong Kong Association of Sexuality Educators, Researchers & Therapists Limited (2009) exploring the perception of compensation dating among 2,966 secondary schools students, it was found that 45 % of the respondents perceived compensated dating as a social interaction for mutual exchange to satisfy one's own needs and 38 % agreed that this was a strategy for gaining quick money.

The findings also identified that there were 4.6 % ($n = 137$) of the students that had the experience of compensated dating. They offered compensated dating so as to support their high spending such as purchasing brand name bags (87 %) and to receive luxurious gifts from the customers (47 %). Another survey of 586 young people aged 12–20 showed that 34 % of the respondents indicated that they would consider compensated dating and 57 % of these respondents suggested that they would do so as to earn quick money (Hong Kong Christian Service, 2009b). There are three observations drawn from the findings. First, a high proportion of adolescents regarded compensated dating as a quick way to earn money. Second, a majority of adolescents offered compensated dating solely because they wanted to possess luxurious goods. Third, many adolescents considered compensated dating as a mutual exchange instead of "selling" sex which is unethical. The findings sound an alarm for educators, social workers, and parents to be alert to the distorted values of adolescents on compensated dating and overemphasis of money and material possession.

Worrying Adolescent Sexual Behavior

Regarding adolescent sexuality, the rates of students having premarital sex have been increasing during the past two decades, though there is a drop in number reported in 2011. According to the youth sexuality surveys conducted by the Family Planning Association of Hong Kong on students studying in Secondary 3 to Secondary 7, rates of adolescent boys having premarital sex were 1.2, 5.6, 8.7, 14.1, and 9.8 % in 1991, 1996, 2001, 2006, and 2011, and the corresponding rates were 0.2, 4.5, 6.7, 8.3, and 7.4 % for adolescent girls. Among those adolescents who reported they had premarital sex in 2011, the mean age of boys and girls was 14.6 and 15.3, respectively. Moreover, 4.4 and 3.0 % of adolescent boys and girls reported that they had their first sexual intercourse at the age under 15 (Family Planning Association of Hong Kong, 2012b). The findings were alarming since they showed that some adolescents already had premarital sex at a young age.

For young adults aged 18–27, the rates of having sexual intercourse experience have increased steadily, whereas the rates of marriage are decreasing. The rates of males having sexual intercourse experience were 39.8, 45.0, 47.3, and 50.0 % in 1996, 2001, 2006, and 2011, respectively. However, the rates of marriage were only 5, 5, 2, and 5 %, respectively. For females, the rates of having sexual intercourse experience were 39.4, 35.3, 39.1, and 42.0 in 1996, 2001, 2006, and 2011, respectively, while the corresponding rates of marriage were 15, 13, 7, and 10 % (Family Planning Association of Hong Kong, 2012a). The findings suggested that youths are open to premarital sex and the trend is growing.

The liberal attitudes of adolescents toward sexuality have also caused concerns among educators and social workers. According to the youth sexuality survey in 2011, 21.0 and 8.0 % of adolescent boys and girls studying in Secondary 3 to Secondary 7, as well as 15.0 and 11.0 % of adolescent boys and girls studying in

Secondary 1 to Secondary 2, accepted that people could have more than one sex partner. Besides, it was found that the majority of adolescents accepted cohabitation. While 73.0 and 69.0 % of adolescent boys and girls studying in Secondary 3 to Secondary 7 accepted cohabitation rather than marriage, 63.0 and 61.0 % of adolescent boys and girls studying in Secondary 1 to Secondary 2 accepted cohabitation (The Family Planning Association of Hong Kong, 2012b). In another study conducted by the Commission on Youth (2012) based on the responses of 4,739 adolescents aged 15–24, 26.4 % adolescents disagreed that sex could only occur between spouses. In addition, 46.0 and 37.0 % of adolescent boys and girls studying in Secondary 3 to Secondary 7, as well as 28.0 and 21.0 % of adolescent boys and girls studying in Secondary 1 to Secondary 2, accepted premarital sex (The Family Planning Association of Hong Kong, 2012b). Obviously, the liberal attitudes toward sexuality among adolescents would create great challenges to youth workers.

Bullying

Generally speaking, bullying behaviors can be classified into four categories: (1) *physical bullying* (pushing, slapping, hitting, fistfighting, and assault), (2) *verbal bullying* (teasing, insulting, and name calling), (3) *social exclusion* (excluding someone from a social group), and (4) *extortion* (asking for money and seizing others' properties) (Wong, Lok, Lo, & Ma, 2008). In a study of physical bullying in Hong Kong, it was found that 17.2 % of the secondary school students sampled claimed that they had bullied other students, 18.3 % claimed that they were victims of physical bullying, and 58.6 % were involved as bystanders in bullying in the last 6 months (Wong, 2004). Another study of school bullying among 7,025 primary school students revealed that 24 % of the respondents admitted bullying other students in the past 6 months (Wong et al., 2008).

With the advancement of technology and the popularity of Internet use, bullying also happens in the cyber world. Cyberbullying becomes the fifth type of bullying behaviors. Cyberbullying is defined as "an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself" (Smith et al., 2008, p. 376). Willard (2005) identified seven types of cyberbullying activities: (1) *flaming* (sending angry, rude, or vulgar messages), (2) *harassment* (sending offensive messages repeatedly), (3) *denigration* (posting harmful, untrue, or cruel statements), (4) *cyberstalking* (sending threats or highly intimidating messages repeatedly to offend others), (5) *masquerading* (pretending to be someone else to make that person look bad or to place that person in danger), (6) *outing* and *trickery* (posting sensitive and private information of a person or forwarding private message of a person to others and engaging in tricks to solicit embarrassing information about a person and then make it public), and (7) *exclusion* (actions that intentionally exclude a person from an online group). Educators suggested that cyberbullying could be more harmful as the anonymity of the act encourages the bullies and threatens the victims (Belsey, 2005).

Beale and Hall (2007) commented that "technology has escalated bullying to a new and particularly insidious level" (p. 8).

Based on a survey of cyberbullying among 908 respondents from Primary Four to Secondary Six, the Hong Kong Christian Service (2009a) found that 13 % ($n=118$) of the respondents admitted bullying other people, while 18 % ($n=168$) claimed that they had been bullied on the Internet last year. Among those who had bullying experience, 60 % of the victims exhibited physical and psychological symptoms, 46 % claimed that their social life was hampered, 36 % claimed that there were negative impacts to their school life, and 15 % suggested that their family life was negatively affected.

Adolescent Poverty

Though Hong Kong is an affluent city in the world, poverty remains a serious social problem in Hong Kong. The Gini coefficient, measuring the disparity between the rich and the poor, increased from 0.518 to 0.537 between 1996 and 2011 (Census and Statistics Department, 2012); Hong Kong was ranked first among 38 highly developed countries, i.e., having the largest income inequality in 2011 (United Nations Development Programme, 2011). Adolescent poverty, in particular, has raised the concern of researchers and social workers. Taking the poverty threshold as 50 % of the median monthly household income, it was found that there were 130,400 children and adolescents aged between 6 and 14 living in poverty in 2011, covering 24.8 % of the children population in Hong Kong. Besides, there were 149,900 youths aged between 15 and 24 living in poverty, accounting for 17.5 % of the youth population in Hong Kong (Hong Kong Council of Social Service, 2012).

When looking into the trends of children and adolescent poverty in the past decade, it was found that the percentages of low-income families having children aged 6–24 were generally higher than the overall low-income families. Moreover, adolescents of ages 15–24 had increased from 15.2 to 17.5 % during the period between 2001 and 2011, while the percentages of general low-income families were steady (Hong Kong Council of Social Service, 2012). When looking into the recipients of Comprehensive Social Security Assistance (CSSA) during the period of 2005–2009, the percentage of adolescent CSSA recipients were constantly higher than the average groups (Commission on Youth, 2012).

There is empirical evidence that poverty has detrimental impacts on adolescent psychosocial development. Studies showed that adolescents living in poverty had high rates of school dropout and poor academic performance (Guo, 1998); less positive attitudes about education aspiration (Kao & Tienda, 1998); negative appraisal of self-worth, a sense of loss of control, resentment, and powerlessness (Lindheim & Syme, 1983); lower occupational aspirations and expectation (McLeod, 1987); more internalizing outcomes such as depression, anxiety, and withdrawal (Conger, Ge, Elder, Lorenz, & Simons, 1994); and externalizing behaviors outcomes such as aggression, tantrums, and acting out (Conger et al., 1994).

Youth Unemployment and Reduced Income

Despite the economic upturns and downturns during the last decade, youth unemployment rate was constantly higher than the overall unemployment rate in Hong Kong. Statistics show that unemployment rate for youths between ages 15 and 19 was 20.8 % and between ages 20 and 24 was 11.0 %, while the overall unemployment rate was only 4.4 % in 2010 (Census and Statistics Department, 2006, 2011). The unemployment rates for youths between ages 15 and 19 and between ages 20 and 24 were almost four times and twice greater than the overall unemployment rate. Regarding the educational levels of youths aged 15–25, it is not surprising to find that the lower the educational level of the young people, the more difficult it was for them to gain employment in the market.

Even when young people are employed, they are still facing economic hardship. It was found that the median monthly salaries of youths aged 15–19 and 20–24 were much lower than the overall median monthly salary in the last decade. While the overall median monthly salary rose to HK$10,500 in 2010, the median monthly salaries of youths aged 15–19 and 20–24 were only HK$5,000 and HK$7,500, respectively (Commission on Youth, 2011). Their salaries were at the margin of the poverty line when taking 50 % of the median monthly household income as the poverty threshold (Smeeding, Rainwater, & Burtles, 2001; Subcommittee to Study the Subject of Combating Poverty, Legislative Council of the Hong Kong Special Administrative Region, 2006). Thus, unemployment and low salaries push the youths to the margin of poverty.

Unemployment during adolescence has negative impacts on adolescent psychosocial well-being. Difficulty in sustaining a job in the job market may lead to a loss of hope, low self-esteem, and decrease in overall life satisfaction (Bowman, 1990). Also, adolescents may develop a sense of "idleness" in the prolonged disengagement from the labor markets, which in turn will decrease their chance of economic success and stable employment in their future life (Edelman, Holzer, & Offner, 2006). This is especially detrimental to economically disadvantaged teenagers, as the desire for financial resources and contribution to their family's economic situation would be demolished without a stable job, which would result in psychological distress (McLoyd et al., 2009).

Understanding Youth Developmental Issues from an Ecological Lens

Theoretically, there are different perspectives in understanding adolescent developmental needs and problems (such as biological, Freudian, developmental, behavioral, cognitive, and sociocultural perspectives). Among the perspectives, the ecological perspective has been commonly used to understand adolescent developmental

issues. Bronfenbrenner (1979) argued that a person's behavior is a function of the interaction of the person's traits and abilities with the environment, that is, B = f(PE), in which B stands for behaviors, P stands for person, and E stands for environment. The ecology of human development involves the scientific study of "the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate environment in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the settings are embedded" (Bronfenbrenner, 1979, p. 21). In other words, it is suggested that adolescent development and behaviors are affected by both the personal factors (such as emotional regulation) and environmental conditions (such as poverty). The "person-process-context" model (Bronfenbrenner, 1986, p. 725) distinguishes the ecological position of human development from other ontological individual approaches.

As far as adolescent development is concerned, the ecological perspective provides us a broader lens to study the risk and protective factors of adolescent problem behaviors. There is ample research which shows the risk factors at individual level (e.g., poor self-efficacy, low self-esteem), family level (e.g., poor parenting, nonintact families), school level (e.g., low academic achievement, poor teacher-student relationship), and community level (e.g., poor neighborhood conditions) (Bradley & Corwyn, 2002; Shek, 2007). On the other hand, there are numerous studies showing the protective factors of individuals in face of adversity. In resilience literature, Hauser (1999) identified several protective factors on different levels, including individual (e.g., hope, faith), relational (e.g., supportive home environment), community (e.g., good schools, community resources), and general (e.g., good fortune). Garmezy (1993) suggested three categories of protective factors that help adolescents to overcome developmental and environmental hazard: (1) personality/dispositional features, such as self-esteem, locus of control, self-efficacy, and optimism; (2) affectional ties within the families, such as cohesion, warmth, and support from adults; and (3) availability of external support systems such as schools, churches, and caring agencies. Smith and Carlson (1997) echoed these suggestions by identifying individual factors, family factors, and external resources as important protective factors of children and adolescents to struggle against adversity. In the Chinese context, similar protective factors, including personal (e.g., positive beliefs and meaning of poverty), familial (e.g., parental support, positive parental role modeling), cultural (e.g., cultural interpretation of poverty), and contextual (blurred poor neighborhood boundaries) dimensions, were identified in adolescents facing economic adversity (Lam, Lam, Shek, & Tang, 2004).

Implications for the Design of Positive Youth Development

To tackle youth developmental issues, the conventional intervention approach is to design a prevention program specifically focused on the developmental issues.

Under this approach, the "problems" and "pathologies" of adolescents are the focus. This approach is prone to criticisms of stigmatizing and blaming the adolescents, oppressing their abilities to overcome the difficulties, and shaping their negative self-identity (Rapp & Goscha, 2012). Moreover, it is difficult to develop a prevention program according to each adolescent developmental issue (Shek et al., 2011). There has been an urge for a positive youth development approach that focuses on adolescent strengths, assets, and potentials rather than adolescent problems (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Shek et al., 2011). According to Catalano et al. (2004), there are several unique features of the positive youth development approach. First, it is a pointer to integrated youth development that focuses on a wide range of youth developmental attributes. Second, it upholds the belief that "problem-free is not fully prepared." Third, it employs the ecological perspective that emphasizes the person-in-environment orientation. Last but not least, it focuses on fostering the development of adolescents' potentials, strengths, and assets to "fight" developmental and environmental risks. Positive youth development approach is analogous to Chinese medicine that emphasizes the concept of "restoring the origin and nurturing the principal strengths" (*gu ben pei yuan*), which suggests that if one has good inner strength, it will help to prevent the occurrence of illness. Similarly, if adolescents have better psychosocial competencies, the risks for adolescents to exhibit problem behaviors could be reduced (Shek et al., 2011).

There are theoretical and empirical supports that positive youth development approach helps to alleviate adolescent developmental problems. Theoretically, it was found that positive youth development is negatively related to adolescent developmental problems. Masten, Monn, and Supkoff (2011) identified that the assets and resources from self, other people, community organization, and the environment help to build up the adolescents' human capital (such as improving their problem-solving capabilities), as well as their social capital (i.e., the connections with other people and the community so that they can call upon them in times of threats). Empirically, the positive youth development programs have been proven to reduce adolescent problem behaviors. In their evaluation of 25 well-evaluated positive youth development programs in North America, Catalano et al. (2004) showed that 96 % of those programs reduced the occurrence of problem behaviors of adolescents. Other studies also showed that developmental programs that nurtured adolescent strengths helped to reduce problem behaviors (Scales & Leffert, 1999; Wilson & Lipsey, 2006).

There is also empirical evidence showing that positive youth development was negatively related to adolescent problem behaviors in the Chinese context. Shek (2010) found that positive youth development was inversely related to behavioral intention of gambling behaviors among adolescents in Hong Kong. Sun and Shek (2012) also suggested that adolescents who had a higher level of positive youth development were more satisfied with life and generally had fewer problem behaviors. As positive youth development is a promising approach to promote holistic development in adolescents, it was adopted as the conceptual foundation upon which the Project P.A.T.H.S. was developed.

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Conceptual Framework Underlying the Development of a Positive Youth Development Program in Hong Kong

Daniel T.L. Shek and Florence K.Y. Wu

Introduction

Many theorists and practitioners regard "conceptual frameworks" as one of the central and potentially important components of bridging the theory-practice gap (e.g., Hills & Gibson, 1992). The utilization of a conceptual framework is not only created and used by scholars and scientists but also for those who apply them in the real-life settings. The synthesis of concepts provides meanings for entities, offers stability in understanding, and helps practitioners to refrain from sheer diversity and minute fraction of knowledge (Smith & Medin, 1981). Before implementing a program, conceptualization is regarded as the foundation and provides effective ways to highlight the emphases of the program and helps practitioners to develop competence in its utilization (Hills & Gibson). As such, the purpose of this chapter is to outline the conceptual framework underlying the Project P.A.T.H.S. in Hong Kong.

Several decades ago, the term "victimology" would best describe the characteristics or major tasks of the psychologists (Seligman & Csikszentmihalyi, 2000). In other words, the focus of psychology was devoted to identifying psychological problems (especially mental illnesses) of humankind (Carr, 2011; Snyder, Lopez, & Pedrotti, 2011), and it had also become a science of healing (Seligman & Csikszentmihalyi). With the influence of Freudian thoughts, adolescence was conceived as a period of "storm and stress" which automatically exists in young people. However, this "pathological"

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view about adolescence has been criticized on two levels. Primarily, there is little evidence showing that adolescence is necessarily a stormy period with mental health problems (Benson & Scales, 2009). Besides, the image of adolescents under this perspective is negative in nature, thus overlooking the positive attributes of young people. In contrast to perspectives that focus on child problems, such as learning disabilities and substance abuse, Damon (2004) advocated the field of positive youth development (PYD) to emphasize talents, strengths, interests, and future potentials in children. The word "positive" stresses on developing human assets and seeks the fundamental strengths of humankind (Seligman, 1998). With the growth of positive psychology in the past two decades (Seligman & Csikszentmihalyi), there is an increasing awareness in seeing youth as resources and the ones with potentials and strengths.

Emphases and Models of the Positive Youth Development Approach

Focus on Positive Development

Positive psychology forms a backdrop for human happiness, optimism, and fulfillment rather than for pathology and deficits that have driven psychology for at least the last 50 years (Seligman & Csikszentmihalyi, 2000). In both the Western and Chinese contexts, growing attention has been devoted to developmentally oriented variables which can promote the development of adolescents (e.g., Benson & Scales, 2009; Sun & Shek, 2010). Most of the recent studies included the notions of personal well-being and maximum personal fulfillment (Benson & Scales), which go beyond the applied developmental systems and enhance the greater role of the influence of ecology on personal development and the interactive influence between the ecology and self.

Theoretically speaking, positive psychology has its root in humanistic psychology which maintains that human beings are "angels" instead of "devils." Huebner, Gilman, and Furlong (2009) pointed out that there were three breakthroughs of positive psychology: from deficit-based to strength-based perspective, from adult orientation to adolescent orientation, and inclusion of community-based activities. Besides, positive youth development also has a root in transpersonal psychology which is concerned about human potentials and different states of consciousness (Scotton, Chinen, & Battista, 1996).

Ecological Emphasis

Besides focusing on the strengths of young people, the influence of ecology on personal actualization is also stressed in the positive youth development approach (Benson & Scales, 2009; Bronfenbrenner & Morris, 1998; Lerner, Brentano,

Dowling, & Anderson, 2002). The basic assertion of the ecological model is that there is a bidirectional fusing of self and context, with individual behavior being influenced by different personal and environmental factors with reference to different systems. Lerner et al. (2002) further articulated three developmental principles of the influence of ecology on individual behavior: (1) temporal embeddedness (the potential for change in person-context relations across the life span), (2) relative plasticity (the potential for system change), and (3) developmental regulations (the person's active agency on his or her own development that stimulates changes in persons and his or her contexts). This articulation acknowledges the countless paths for adolescent positive development and thriving with ongoing negotiation between one's unique self and his or her contexts, striking a balance between individual capacity or strengths and the "growth promoting influences of the social world" (Lerner, 2004, p. 44).

Developmental Assets

Developmental asset is another cornerstone concept in the positive youth development literature (Benson, 2001; Benson & Scales, 2009; Roehlkepartain, 2012). A call for the development of adolescent developmental assets has evolved to spin the world of youth development in a different direction. The 40 developmental assets weaved together and introduced by Benson have become one of the main streams cultivating and empowering youth's strengths (Benson). By promoting external assets (including support, empowerment, boundaries and expectation, and constructive use of time) and internal assets (including commitment to learning, positive values, social competencies, and positive identity), a scaffold is created in which adolescents are able to establish strong lives and become compassionate, engaged, purposeful, and hopeful (Benson, 2010). Findings from a recent research conducted by Benson and his colleagues in the Search Institute that explored life goals for youth in Australia, Cameron, Canada, India, Thailand, Ukraine, the United Kingdom, and the United States showed that 80 % of youth from these countries shared common pursuit of life goals. The five important life goals are (1) being hopeful about the future; (2) having a sense that life has meaning and purpose; (3) making the world a better place; (4) protecting the earth's air, land, and water; and (5) knowing what is unique and valuable about ourselves as humans (Benson, p. 6). These findings are encouraging because young people held these aspirations and goals for themselves. In the past decade, adults gave full energy in developing youth's assets with the assumption that there might be some inadequacies in pursuing their life goals or excelling their potentials. However, with Benson's recent research, it suggests that adolescent development is a matter of discovery. The assets are intrinsic to adolescents, and what we should do is to discover and aid adolescents to discover. The assets suggested by Benson (2001, 2010) require adults to create positive, long-lasting relationships with young people, and this scaffold is a tool to catalyze community visioning and social change (Roehlkepartain).

In their reflections on the work regarding positive youth development, Pittman, Irby, Tolman, Yohalem, and Ferber (2003) highlighted several principles of youth development. The first principle is "problem free is not fully prepared" which underscores the importance of development of positive attributes in young people. The second principle is "while academic competence is critical, it is not enough" which emphasizes the importance of holistic development of adolescents. The third principle is "competence alone, while critical, is not enough," an assertion which underscores the dynamic nature of youth development. The fourth principle is that the four "Cs" (competence, confidence, character, and connectedness) are important. The fifth principle is that the three "Ls" (learning to be productive, learning to connect, and learning to navigate) are important learning tasks for young people. Based on these principles, a review of the literature shows that several developmental ideals are intrinsic to positive youth development. These include competence, confidence, character, connectedness, contribution, compassion, and care.

Psychosocial Competence

The concept of developmental asset is closely related to the core components of social and emotional learning. According to the Collaborative for Academic, Social, and Emotional Learning (CASEL), social and emotional learning is "a process for helping children and even adults develop the fundamental skills for life effectiveness. SEL teaches the skills we all need to handle ourselves, our relationships, and our work, effectively and ethically. These skills include recognizing and managing our emotions, developing caring and concern for others, establishing positive relationships, making responsible decisions, and handling challenging situations constructively and ethically. They are the skills that allow children to calm themselves when angry, make friends, resolve conflicts respectfully, and make ethical and safe choices" (http://casel.org/why-it-matters/what-is-sel/). Weissberg and O'Brien (2004) pointed out that social and emotional learning has several components: (a) self-awareness (knowing one's feeling and having a realistic assessment of our own abilities, constructs such as spirituality and self-efficacy), (b) social awareness (ability to sense what others feel and take others' perspectives, constructs such as moral competence and prosocial involvement), (c) self-management (ability to handle emotions and delay gratification and having perseverance when facing frustrations, constructs such as emotional competence and resilience), (d) relationship skills (ability to maintain relationships and handle emotional problems, dealing with interpersonal pressure and conflicts, and seeking help when needed, constructs such as bonding and behavioral competence), and (e) responsible decision-making (ability to assess risk in a realistic manner and generate alternative solutions and taking personal responsibility for one's decisions, constructs such as beliefs in the future and cognitive competence).

Psychosocial competence has been regarded as an important protective factor in youth development. Hauser (1999) stated that protective factors are "key

constructs in conceptualizations of resilience" which "moderate the effects of individual vulnerabilities or environmental hazards, so that a given developmental trajectory reflects more adaptation in a given domain than would be the case if protective processes were not operating" (p. 4). There are protective factors at different levels, including individual, family, community, and cultural aspects. Smith and Carlson (1997) similarly suggested that factors at the individual, family, and external support systems serve as important protective factors in children and adolescents experiencing environmental hazards. Obviously, by strengthening the psychosocial competence of adolescents, their ability to cope with challenges would be promoted. While the concept of protective factor has commonly been used in the prevention science literature, it is also utilized in positive youth development programs. In a meta-analysis of 213 school-based universal programs focusing on social and emotional learning in children and adolescents ($N = 270,034$ children and adolescents), results showed that SEL programs led to improvement in social and emotional skills, attitudes, behavior, and academic performance in the program participants Durlak et al. (2011). Similar findings can be seen in the review of Catalano et al. (2012).

Character Strengths

There has been a revival in the research work on character strengths in the past two decades. Based on the literature, Park and Peterson (2005) proposed 24 character strengths which contribute to optimal lifelong development and good life. These character strengths can be organized under six broad categories of virtues. First, five character strengths including creativity, curiosity, open-mindedness, love of learning, and perspective can be subsumed under the virtue of "wisdom and knowledge." The second virtue is "courage" which includes honesty, bravery, persistence, and zest. Third, kindness, love, and social intelligence are clustered under the virtue of "humanity." Fourth, the virtue of justice consists of three character strengths, including fairness, leadership, and teamwork. The fifth virtue is temperance, which covers forgiveness, modesty, prudence, and self-regulation. Finally, transcendence as a virtue includes five character strengths (appreciation of beauty and excellence, gratitude, hope, humor, and religiousness).

In a series of empirical studies using the Values in Action Inventory of Strengths (VIA-IS) (Moore & Lippman, 2005), Park and Peterson (2005) showed that all the character strengths contribute to fulfillment, with certain character strengths having closer relationship with positive youth development and good life. Cardemil, Reivich, and Seligman (2002) further found that character strengths in school students reduced depressive symptoms. Based on a sample of 6,000 youth in Grades 6–12, Scales, Leffert, and Vraa (2003) found that the strengths of planning and decision-making and love of learning (characters related to wisdom and knowledge) were positively related to adolescents' thriving and school success.

Thriving and Spirituality

Thriving is another popular concept in the PYD literature. Lerner et al. (2002) suggested that the thriving process involves the growth of functionally valued behaviors across development (including competence, character, connection, confidence, as well as caring and compassion) and their impacts on the attainment of structurally valued behaviors (including contribution to self, family, community, and civil society). Thriving is termed as an "underutilized" construct and is only rarely employed to denote either a status or process of adolescent development (Benson & Scales, 2009; Lerner et al., 2002). As Masten and Curtis's (2000) research suggested, competence is "the adaptational success of an individual in the developmental tasks" (p. 533), and "thriving" hints beyond developmental competence exhibiting more than being successful in accomplishing basic developmental tasks (Benson & Scales). Benson and Scales recognized that the emphasis of positive youth development has aided adolescents in accomplishing basic developmental tasks. However, they reminded the field that the development might only denote adolescents' attainment of what is needed or just "doing okay" (Masten, 2006). Larson (2000) lamented in his review that "many youth do their schoolwork, comply with their parents…but are not invested in paths into the future that excite them or feel like they originate from within" (p. 170). Therefore, a distinction should be drawn between "adequacy" and "thriving." "Thriving" should not only be treated as an outcome predicted by experiencing personal and social assets (Theokas et al., 2005). Thriving should go beyond the "point-in-time status" and represent the dynamic interplay of young people being intrinsically ("from within" as Larson mentioned) animated and energized by discovering their uniqueness and potential (Benson & Scales). The "thriving paths" vary within each young person, yet provision of intended platforms by adults (in family and in school) for discovery during adolescence is crucial in helping the adolescents to overcome life hurdles to pursuing their passions and igniting life energy.

Spiritual development, which explores the virtues and traits reflecting strength of character, is claimed as a thriving marker of adolescents (Benson & Scales, 2009; Seligman, Steen, Park & Peterson, 2005). Given the ambiguity and complexity of the term, fewer than 2 % of scientific publications on adolescents address spiritual development (Benson & Roehlkepartain, 2008). The attempt to review and integrate the domain of spirituality into youth development theory, policy, and practice is scant (Roehlkepartain, 2012; Sun & Shek, 2012). However, Benson and Roehlkepartain cautioned the field that the continuous negligence of addressing spiritual development among adolescents is "thwarting healthy growth" of them (p. 13), and Roehlkepartain furthered argued that spiritual development is a "focus on what it means for youth to thrive" (p. 33). As spirituality has significant potential to strengthen young people, spiritual development becomes the priority in youth development and aids to nurture young people holistically within a global and pluralistic context.

According to Roehlkepartain (2012), thriving is one of the major advocacies in positive youth development and is sustained as a crucial developmental element in

recent years. Actually, spirituality is one of the indicators of thriving in positive youth development (Benson & Scales, 2009). A research on the spiritual lives and interests of over 10,000 freshmen of 200 colleges and universities released by the Higher Education Research Institute of UCLA (Astin, Astin, Lindholm, & Bryant, 2005) reported that two-thirds of the students perceived that spirituality was a source of joy for them. Moreover, the students considered that it is essential to seek opportunities to search for meanings in life and help them grow spiritually. The spiritual development presses the youth to look inward to accept and discover their potential to "grow, contribute, and matter" and to look outward to connect with life (Benson & Roehlkepartain, 2008, p. 20). The deepening interconnectedness within themselves and among the significant figures in their lives aids adolescents to develop clearer identity formation and hence being a full human being (Larson, Hansen, & Moneta, 2006). Researchers further argued that these interconnectedness and authentic relationships established are critical for adolescents to discover and nurture their inner sparks (Benson & Scales, 2009; Roehlkepartain, 2012; Scales, Benson, & Roehlkepartain, 2011). The power of human spirit ameliorates the thriving experience of adolescents and therefore enhancing their positive youth development.

There are researches highlighting the important role of thriving in adolescent well-being (Benson & Scales, 2009; Roehlkepartain, 2012; Scales et al., 2011; Seligman & Csikszentmihalyi, 2000). These developments could have been termed as what Benson (2007, 2010) suggested as the "think tank" to move the field toward more professional development. The "action tank," which mobilizes the significant others to nourish the youth, shares the same importance in excelling adolescents' potentials in the positive youth development. There is an Ethiopian proverb stating that "when spider webs unite, they can tie up a lion." It is understandable that people might count on the policy-oriented strategies to aid adolescents in a country. Benson (2010), however, argued that much of the capacity of fostering adolescents' growth lay within the people of the community, and Roehlkepartain echoed with Benson's argument that the people of the community have the power within themselves to build young people's assets. Through systematic and evidence-based designed programs, systems, and policies, every adult can participate in nurturing the adolescents' growth and advance the vision of asset-rich communities (Roehlkepartain). The togetherness of the whole community might echo with the favorite lines of Benson (quoted from Roehlkepartain) that "if you breathe, you're on the team" (p. 32).

Engagement and Connectedness

Engagement is another hallmark of positive youth development. In their research, Gardner, Csikszentmihalyi, and Damon (2001) defined the "good work" with three "Es," which are "excellent," "ethical," and "engaging." The term "good" aids the adolescents to develop a vision of pursuing quality work ("excellent") and searching for personal meanings ("engaging") while maintaining the connection with the

community and society and considering its consequences on others ("ethical"). These engagements foster adolescents to understand the connection of their learning at school with the world of work and thus develop a sense of purpose. Damon, Menon, and Bronk (2003) found that early development of a sense of purpose in adolescence is vital to positive youth development as "purpose is a stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond self" (p. 121). To be engaged in meaningful tasks in adolescents' lives is one of the major developments in positive youth development (Lerner, 2004). The development of purpose drives the adolescents to strive for their personal meanings and hence thrive along their growth pathways.

Besides, further connecting oneself to the community and developing a sense of moral responsibility contribute to adolescents' thriving experiences as well (Barendsen & Gardner, 2010). Substantial literature has already showed that moral character typically starts to form during adolescence and continues to be shaped throughout secondary school and college years (Barendsen & Gardner, 2010; Colby & Kohlberg, 1987). The provision of platforms and opportunities, especially in school contexts, for adolescents' self-reflections on the meanings of connecting oneself to the outer world is crucial. In addition, the process of self-reflection leads adolescents to breed self-leadership (leading their own lives) and thus become more aware of their responsibilities to lead the society. Furthermore, linking and combining academic lessons with meaningful and experiential learning inside and outside classrooms deepen their understanding of the self- and societal responsibility and encourages the adolescents to take the real lead of "active construction of [their] knowledge" (Colby, 2007, p. 7).

Besides, the connection of young people to different socializing agents is vital to healthy development in young people. Yust, Johnson, Sasso, and Roehlkepartain (2006) lamented that traditions have rarely been in dialogue with young people and traditions have been passed from one generation to the next with relatively little reflections on "why" and "how" (Benson & Roehlkepartain, 2008). A key insight in positive youth development is that children and adolescents are believed as self-directed learners who are taking the lead in guiding their own growth and learning, and the term "development" emphasizes changes across time (Benson & Roehlkepartain) and prevails across their life spans. Benson, Scales, Hamilton, and Sesma (2006) further affirmed that all socializing systems significantly affect all aspects of young people's development. Schools are well-situated settings in which youth development programs are implemented (Weissberg & Greenberg, 1998). Therefore, it is important for youth workers and educators to provide and create safe and respectful environments where young people can explore and cultivate their own learning and to offer opportunities for young people for explorations without imposing adults' beliefs on them.

In addition to creating a nutrient-sufficient environment to nurture adolescents' potentials, young people also need adults as advocates who create conditions to foster growth. Relationships are the oxygen to human developments and it is in the embrace of the relationships that adolescents discover their worth, purpose in life, and their importance in the world (Benson, 2010). Bronfenbrenner and Morris

(1998) argued that the roles of stable relationships among the adolescents and adults "are necessary for [adolescents'] psychological growth" (p. 993). Rhodes (2002), in addition, affirmed in his research that young people benefit from having many caring adults in their lives, where the healthy relationships create a protective buffer against risk behaviors. These research findings pronounce that adults, such as parents, teachers, mentors, and neighbors, are the "assets" of the adolescents' growth. As the positive youth development programs would be implemented in educational settings, "to start where we are" (Benson, p. 15), teachers and workers in schools are critical figures because they are a daily source of caring words and actions. With the belief that everybody is on the "web" and has efforts to make a difference, adults would undoubtedly be the advocates that adolescents would look for assistance. Yet, the engagement of adults should be on the same level with shared visions that can drive positive changes in adolescents.

Positive Youth Development Constructs

In their discussion of the conceptual model underlying positive youth development, Benson and Saito (2000) suggested that adolescent developmental strengths (such as mastery, belonging, engagement, support, identity, efficacy, and competence) could be cultivated by several youth development inputs, including programs, organization, systems, and community. In a review of 77 programs in the USA (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004), it was found that 25 programs were successful. Catalano et al. (2004) identified some common constructs in the successful programs and highlighted the 15 constructs as follows:

1. Bonding: positive relationship with healthy adults and positive peers in different contexts.
2. Resilience: to develop and adapt well under adversity.
3. Social competence: ability to interact well with others and have meaningful social engagement.
4. Emotional competence: ability to recognize and manage feelings in oneself and understand others' emotions.
5. Cognitive competence: intellectual, creative, and critical thinking abilities and problem-solving skills.
6. Behavioral competence: ability to take action such as having refusal skills.
7. Moral competence: ability to differentiate right and wrong behavior.
8. Self-determination: ability to think independently and having a sense of autonomy.
9. Spirituality: having a sense of purpose, hope, or beliefs in a higher power.
10. Self-efficacy: ability to cope and having beliefs that one has the ability to master.
11. Clear and positive identity: healthy identity and self-image.
12. Beliefs in the future: ability to develop future potential goals and optimistic outlook.

13. Recognition for positive behavior: positive behavior such as prosocial behavior or positive changes in behavior are duly recognized and rewarded.
14. Opportunities for prosocial involvement: making positive contribution to groups and the society.
15. Fostering prosocial norms: developing clear and explicit standards for prosocial engagement.

Use of Positive Youth Development Constructs in the Project P.A.T.H.S.

Theoretically, it is desirable to apply the above Western positive youth development constructs identified in the successful programs to a non-Western context, such as the Chinese culture (Shek, Siu, & Lee, 2007; Sun & Shek, 2012). There are substantial reviews and researches highlighting the important role of positive youth development constructs on adolescent well-being and life satisfaction (Catalano et al., 2004; Diener, Suh, Lucas, & Smith, 1999; Paxton, Valois, Huebner, & Drane, 2006; Shek, 2010a; Sun & Shek, 2012). The propositions that positive youth development influences well-being and health outcomes of adolescents (Sun & Shek) and that positive youth development attributes, such as owning bonding and social roles, are closely related to life satisfaction (Paxton et al., 2006) have been validated and proven to have strong relationships. In addition, numerous researches have affirmed that positive youth development and life satisfaction are negatively associated with problem behaviors such as substance abuse and juvenile delinquency, sexual risk-taking behaviors, and violence and aggression among adolescents (Catalano et al.; Sun & Shek). However, Shek (2010b) has pointed out that there are comparatively fewer studies on the quality of life of children and adolescents and it is especially rare that the life satisfaction of adolescents in Chinese contexts is investigated. Thus, Sun and Shek conducted a research study on investigating the predictive effects of positive youth development on life satisfaction and problem behaviors by a large community sample of Chinese early adolescents in Hong Kong. The study is an important addition to the literature as it validated the interrelationships among positive youth development, life satisfaction, and problem behaviors in the Chinese context. This research further articulated the effects of life satisfaction on adolescents' future behavior and life outcomes instead of putting the sole focus on the factors that contribute to the experience of life satisfaction (Pavot & Diener, 2008). In conjunction with other findings suggesting that positive youth development programs are able to promote positive behavior and aid adolescents to thrive with life satisfaction, it is recommended that regular curricula-based positive youth development programs should be implemented in the school contexts (Shek, 2010c). Of course, one related issue that should be addressed is whether there are any cross-cultural variations in the use and impacts of positive youth development constructs.

Hill and Gibson (1992) advocated that the understanding of the conceptual framework provides systems and scaffolds to bridge over the theory and practice. The development of the conceptual framework of the Project P.A.T.H.S. was based

on a thorough literature review on the developmental assets, positive youth development constructs, and recent developments of positive youth development, such as thriving, spiritual development of the youth, and the dedication of adults in the process. It is argued that the concept of positive youth development and the related models serve as the background of the development of the indigenous positive youth development program. The 15 positive youth development constructs identified in the existing successful programs are incorporated in the Project P.A.T.H.S. A detailed description and the application of the constructs in the Project P.A.T.H.S. can be seen in two special issues on the conceptual frameworks of the project (Shek & Merrick, 2006; Shek, Sun, & Merrick, 2012).

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Development of a Positive Youth Development Program in Hong Kong

Daniel T.L. Shek and Rachel C.F. Sun

Introduction

With reference to the adolescent developmental issues outlined in an earlier chapter of the book, it can be seen that primary prevention programs targeting specific adolescent developmental problems and positive youth development programs are called for. However, research findings show that there are very few validated and multiyear positive youth development programs in Hong Kong. Even if such programs exist, there are several limitations. First, most of the programs are deficits-oriented programs focusing on adolescent problems instead of strengths (Shek, Ma, & Sun, 2011). Second, systematic and long-term evaluation of the available programs does not exist (Shek & Sun, 2012). Third, validated programs for Chinese adolescents are almost nonexistent (Shek & Yu, 2011).

Against the above background, The Hong Kong Jockey Club Charities Trust approved HK$400 million in 2004 to launch a project entitled "P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme." The word "P.A.T.H.S." denotes **P**ositive **A**dolescent **T**raining through **H**olistic **S**ocial Programmes. The Trust invited academics of five universities in Hong Kong to form a research team

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with the first author as the principal investigator to develop a positive youth development program for junior secondary schools, train potential program implementers, and evaluate the effectiveness of the program in promoting holistic adolescent development in Hong Kong. Due to the overwhelming success of the program, the project was extended for another cycle in 2009, with an additional earmarked grant of HK$350 million.

Modeling after the concepts of universal prevention and secondary prevention in public health, two tiers of programs (the Tier 1 and Tier 2 Programs) are intrinsic to this project. The Tier 1 Program is a positive youth development program where all students from Secondary 1 to Secondary 3 participate in the program, normally with 20 h of training in the school year at each grade (i.e., universal program). As roughly one-fifth of adolescents might need help of a deeper nature, the Tier 2 Program is designed for at least one-fifth of the students who have greater psychosocial needs at each grade (i.e., selective program).

In the Tier 1 Program, 15 adolescent developmental constructs are covered. These include promotion of bonding, cultivation of resilience, promotion of social competence, promotion of emotional competence, promotion of cognitive competence, promotion of behavioral competence, promotion of moral competence, cultivation of self-determination, promotion of spirituality, development of self-efficacy, development of a clear and positive identity, promotion of beliefs in the future, provision of recognition for positive behavior, provision of opportunities for prosocial involvement, and fostering prosocial norms (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). With reference to these positive youth development constructs, the objectives of the project, particularly the Tier 1 Program, are (a) to foster a clear and positive identity and to promote spirituality in adolescents (Character); (b) to cultivate self-determination, self-efficacy, resilience, and beliefs in the future in adolescents (Confidence); (c) to promote bonding in adolescents (Connection); (d) to promote social, emotional, cognitive, behavioral, and moral competence in adolescents (Competence); (e) to develop adolescents' sympathy and love for others (Compassion); (f) to provide opportunities for prosocial involvement and foster prosocial norms (Caring); and (g) to cultivate adolescents' contribution to the society (Contribution).

Design of the Tier 1 Program

Several steps were involved in the design of the Tier 1 Program. In the first step, a thorough literature review on existing positive youth development programs (Biglan, Mrazek, Carnine, & Flay, 2003; Flay & Allred, 2003; Greenberg et al., 2003; Johnson & Millstein, 2003), including the related meta-analyses (Greenberg, Domitrovich, & Bumbarger, 2001; Tobler et al., 2000; Wilson, Gottfredson, & Najaka, 2001), was carried out. Second, a thorough literature review on the psychosocial skills to be acquired in adolescence, such as social and emotional skills to be developed in adolescence (e.g., Calderra & Merrell, 1997; Cartledge & Milburn,

1995; Shochet et al., 2001), was examined. Third, reviews on some of the successful programs (e.g., Life Skills Training, PATHS, Project ALERT, Seattle Social Development Project, SMART Moves, SMART Leaders, and Social Competence Promotion Program for Young Adolescents) were carried out. In particular, some local models (Shek, Sun, & Merrick, 2012) were intensively reviewed. Finally, the theoretical models underlying existing positive youth development programs (e.g., Botvin & Griffin, 2001; Hansen, 2001) and the different models of application of theoretical concepts in the programs have been reviewed. In addition, based on a review of the work in the positive youth development literature (e.g., Elias, Gager, & Leon, 1997; Flay, 2002; Roth, Brooks-Gunn, Murray, & Foster, 1998), the following principles are maintained in the process of designing the Tier 1 program.

- *Principle 1*: The program is a comprehensive universal program that utilizes a wide range of positive youth development constructs that have been identified in the effective programs.
- *Principle 2*: Relevant theoretical models and research findings in both Western and Chinese contexts are used to guide the development of the program.
- *Principle 3*: Holistic adolescent development in different domains (physical, psychological, social, and spiritual domains) is focused upon.
- *Principle 4*: Both adolescent developmental assets and developmental problems (e.g., drug, sex, delinquent, violence, lifestyle, money spending, and mental health issues) are considered in the process.
- *Principle 5*: The proposed program content is developmentally appropriate.
- *Principle 6*: Relevant cultural elements are included in the program.
- *Principle 7*: Multiyear intervention programs rather than one-shot programs are designed.
- *Principle 8*: Proper and adequate training is planned for teachers and social workers who are implementing the programs.
- *Principle 9*: Relevant teaching strategies and methods (e.g., using peers to demonstrate skills and change norms) are used to maximize the learning effects.
- *Principle 10*: Active participation and involvement of students are emphasized.
- *Principle 11*: Besides classroom activities, programs outside the classroom are developed.
- *Principle 12*: Generalization of the competence developed to the real-life world is emphasized.
- *Principle 13*: Students are involved in the design of the program activities.
- *Principle 14*: Relevant issues (e.g., gender differences, school differences, and class differences) are considered in the program design.
- *Principle 15*: Besides changing the students, attempts to change the families (e.g., encouraging parental involvement) and schools (e.g., school improvement and reorganization initiatives included) are included.
- *Principle 16*: Ongoing evaluation at all stages is carried out.

There are several specific features in the design of the teaching units. First, the teaching units were developed with reference to the positive youth development constructs identified in the successful positive youth development programs.

Table 1 Distribution of teaching units across Secondary 1 to Secondary 3 (S1–S3) curricula with reference to the 15 positive youth development constructs

Full program

15 Positive youth development constructs	No. of sessions (each has 30 min)			
	S1	S2	S3	
1. Bonding	4	2	2	Core program
2. Social competence	2	2	4	
3. Emotional competence	2	4	2	
4. Cognitive competence	2	2	2	
5. Behavioral competence	2	2	2	
6. Moral competence	2	2	4	
7. Self-efficacy	4	2	2	
8. Prosocial norms	2	4	2	
9. Resilience	4	4	4	
10. Self-determination	4	2	2	
11. Spirituality	2	4	4	
12. Clear and positive identity	4	2	2	
13. Beliefs in the future	2	4	4	
14. Prosocial involvement	4	4	4	

Note. The 15th construct of "Recognition for Positive Behavior" is spread over all 14 constructs. This construct is used as a teaching strategy and no teaching activity is designed for this construct

In other words, the best available evidence was used to develop the program. Second, instead of looking at the deficiencies of young people, positive attributes of young people were assumed in the program development. Hence, the focus was put on collaborating with rather than controlling the students. Third, indigenous focus was maintained and curriculum materials were developed with particular reference to the Chinese culture. Fourth, relevant developmental issues, such as gender differences and subcultural differences, were taken into account. Fifth, the units were designed with reference to the developmental progression of junior secondary school students in Hong Kong (see Table 1).

Sixth, an experiential learning approach was used in the teaching and learning process. Instead of using a didactic approach, it was believed that students would learn better if they learn through real experience. Seventh, students are encouraged to have personal reflections in the process (i.e., reflective learning). As such, reflection activities were designed to facilitate personal reflection. Eighth, as active involvement of the students is a condition for successful learning, related opportunities were included in the curriculum. Ninth, activities to promote teacher-student and student-student interaction were designed to promote the teaching and learning effects. Finally, the curriculum calls for a redefinition of the roles of teachers and students compared to the traditional Chinese conception. Instead of expecting teachers to be "experts," they are expected to be "facilitators" in the project. In addition, students are seen as active learners and reflective agents instead of passive learners.

For each unit, there are several sections, including unit aims, learning targets, teaching materials, teaching methods, implementation plan, teaching tips, and supplementary activities. Three examples are presented in this chapter. The first unit is on cognitive competence (see Appendix A). The other two units are on emotional competence (see Appendices B and C).

Appendices

Appendix A: Unit CC1.1 (The Brain: Human Software)

Construct
Cognitive competence

Target Participants
Secondary 1 students

Unit Aim
To help students differentiate rational, creative, and critical thinking and to understand the importance of self-reflection

Learning Targets

1. To understand rational, creative, and critical thinking
2. To identify the basic concepts and the importance of self-reflection

Teaching Materials

- **PowerPoint Slides**: "Brain Teaser" – Questions and Answers (Appendix A1)
- **Reference Materials for Instructors**: "Brain Teaser" – Questions and Answers (Appendix A2)
- **PowerPoint Slides**: "A Street Lamp" – Story and Questions (Appendix A3)
- **Reference Materials for Instructors**: "A Street Lamp" – Story and Questions (Appendix A4)
- **Materials Requiring Preparation**: "A Street Lamp" – Answer Cards (8 sets) (Appendix A5)
- **Reference Materials for Instructors**: "Blackboard Layout" (Appendix A6)
- **Reference Materials for Instructors**: "Return of the Wolves" (Appendix A7)
- **Worksheet**: "Reflection Keys" (Appendix A8)
- **Growth Puzzle**

Teaching Methods

- Group game
- Class discussion

Implementation Plan (30 min)   👍👍 Primary activity
                                                             👍 Secondary activity

Activity	Procedures	Teaching materials
I. Warm-up activity	1. Divide students into eight groups	Appendix A1
Brain teaser	2. Show the PowerPoint slides: "Brain Teaser." Let students find the answers in groups	Appendix A2
(8 min)	3. Give pieces of white paper for students to write down their answers (time limit: 5 min). Each group has to write down their answers on the blackboard	
	4. Ask students how they got the answers and point out the importance of thinking	
II. Group game	**Aim: To recognize rational, creative and critical thinking**	Appendix A3
A Street Lamp 👍👍	1. Show the PowerPoint slides: "A Street Lamp." Give each group a set of answer cards for group discussion on the questions listed on the PowerPoint slides. A student from each group should post their answers on the blackboard (Appendix A6) and explain them	Appendix A4
(5 min)	2. Ask students what rational thinking, creative thinking, and critical thinking are. Briefly explain the three definitions	Appendix A5
	3. Give the answers for "A Street Lamp." Point out the importance of thinking in our daily lives and that different thinking styles give us different perspectives to understand an issue. Encourage students to apply the thinking skills	Appendix A6
III. Class discussion	**Aim: To understand the importance of self-reflection**	Appendix A7
Reflection Keys 👍	1. Use a solemn tone to tell the story "Return of the Wolves." Repeat the story 3–4 times, ranging from a solemn tone to a relaxed tone (Appendix A7)	Appendix A8
(10 min)	2. Observe the responses of the students. They may start laughing and question the reaction of the main character. Stop and discuss with the class by asking: (i) How do you feel about the main character? (ii) What can the little shepherd and the farmers do to change the ending of the story? (iii) Why didn't they reflect on their own behaviors?	
	3. Summarize students' ideas and point out the importance of reflection: Self-evaluation in daily life helps us grow and gain valuable experience. Discuss: What questions should we ask when doing self-reflection?	
	4. Briefly summarize the students' points and conclude that reflection is a thinking process: (i) Based on personal experiences (ii) Having no preset assumptions (iii) Invaluable in itself	
	5. Distribute the "Reflection Keys" (Appendix A8). Discuss with students the questions listed on the "Reflection Keys"	

(continued)

Activity	Procedures	Teaching materials
IV. Conclusion	1. Explain the importance of thinking in a person's development	
(2 min)	2. Make a simple analogy: Thinking is like a software for people to handle issues, and thinking skills are the programs	
	3. Encourage students to apply thinking and reflection skills in subsequent units and in their daily lives	
V. Self-reflection	1. Distribute the Growth Puzzle and invite students to take part in self-reflection	Growth Puzzle
(5 min)	2. Praise students for their participation during the lesson	

Teaching Tips

1. Warm-up activity

- The activity can be an individual or group game, depending on the cooperativeness of students
- Instructors can make the additional materials prior to the lesson (e.g., a 12-piece set of human-figure pictures for each group) to facilitate discussion
- This activity is designed for students to exercise their brains. Time control is important as students may spend a lot of time finding the answers. If students cannot come to the answers after a certain period of time, instructors should give some hints or reveal the answer

2. **"A Street Lamp"**

- Before the game starts, explain the rules and regulations (e.g., time limit)
- Most students should be able to get the answers quickly. To extend students' horizon of thinking, instructors can invite them to describe the street lamp by using different perspectives of thinking. Students can also be invited to explain the definitions of the three thinking skills after they have voted for the answers. Instructors can use other examples for students to apply the three thinking skills (e.g., "a pen" or "a telephone")
- To increase students' interests and to encourage participation, instructors can give prizes to groups getting the correct answers
- Thinking skills are important to students. Instructors should clearly define and explain the three types of thinking. If needed, references can be made to journal articles
- Rational thinking refers to evidence-based reasoning, which means that our decisions are made based on reasons, not instincts. We have to consider the consequences before making a decision
- Creative thinking refers to ideas that are novel and break away from old-fashioned or conventional thinking styles

- Critical thinking refers to reflections on an issue by asking questions and questioning its reliability (critical thinking should be incorporated into rational and creative thinking; training focused on critical thinking will be implemented in the Secondary 3 curriculum)

3. **"Reflection Keys"**

- The story "Return of the Wolves" provides a relaxed atmosphere in the classroom. It aims at bringing out the importance of reflection and thinking. Students should focus not on the content of the story but on the importance of reflection
- Examples can be used as an illustration if students do not understand the meaning of reflection
- Instructors should give genuine appraisal to students. Write down the comments of students on the blackboard
- Use an A4 cardboard to make the "Reflection Keys" and post it on the classroom notice board. Students can use the "keys" to reflect on the learning process of other lessons

Supplementary Activity (Optional)

Activity	Content	Recommendations
Thinking competition	Aim: To train students' thinking skills Students join the competition on a voluntary basis. The competition can be an interclass or intra-class one. Each competitor (individual or group) answers a number of questions within a limited time (the number of questions to be answered can be determined by the instructors). The questions should be about the three thinking skills learned in this unit. The individual/team that gets the most points will win a prize	Questions can be found in related books (e.g., logical thinking). Set a collection box inside the classroom for students' answers. This activity can be implemented with other functions of the school

Appendix A1

PowerPoint Slides: "Brain Teaser" – Question and Answer

Appendix A2

Reference Materials for Instructors: "Brain Teaser"
Question and Answer
Put the following 12 people into 6 rows, each with 4 people.
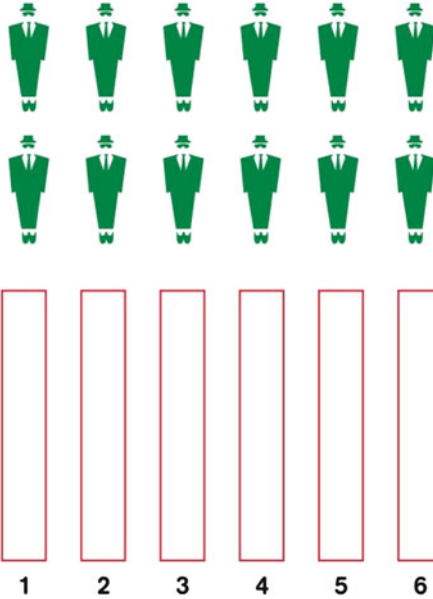
Answer
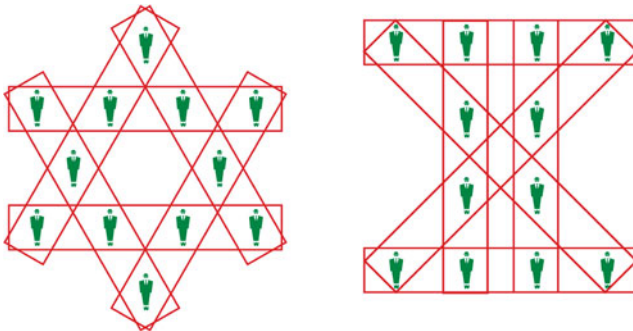
Appendix A3

PowerPoint Slides: "A Street Lamp" – Story and Question

Appendix A4

Reference Materials for Instructors: "A Street Lamp" – Story and Question

Story
One day, three men walked along a street and saw a street lamp. They had the following thoughts:

A: "If the street lamp could walk around and flash like a neon light, it would be wonderful!"
B: "With this street lamp, people can walk in the dark. How convenient!"
C: "Why is the lamp fixed beside the road? Isn't there a greater need for the middle of the street to be lighted?"

Question
A, B, and C have applied different thinking perspectives: rational, creative, and critical. What kind of thinking has each applied? Discuss with your group and post the answer card on the board.

Answers

A – Creative thinking
B – Rational thinking
C – Critical thinking

Appendix A5

Materials Requiring Preparation: "A Street Lamp" – Answer Cards

(Cut along dotted lines)

Rational thinking

Creative thinking

Critical thinking

Appendix A6

Reference Materials for Instructors: "Blackboard Layout"
    *Prepare the blackboard as shown below so that every group can see the answers of the other groups.

Group	A	B	C
1	Critical thinking	Creative thinking	Rational thinking
2			
3			
4			
5			
6			
7			
8			

Appendix A7

Reference Materials for Instructors: "Return of the Wolves"
Once upon a time, there was a little shepherd. He tended his flock of sheep in the pasture. The little shepherd sat under a tree and gazed up at the sky. "It's so boring to watch the sheep graze every day with nothing else to do. I want to do something fun!" He stood up and looked around. He noticed the farmers working industriously in the fields. He thought to himself, "The farmers work very hard. I am going to play a trick on them to entertain them!" The little shepherd then ran downhill and shouted, "Help! Wolves! My sheep are being attacked by the wolves! Help! Help!"

    The farmers on the hillside immediately took their tools and rushed to the hill. They looked around nervously but found no trace of wolves. The little shepherd laughed to himself and said to the farmers, "The wolves have gone!" The farmers asked him, "Are you hurt? Is your flock okay?" The little shepherd told the farmers that he was not hurt and that his flock was fine. The farmers reminded him to be careful and returned to their fields.

    The next day, the little shepherd was tending his flock again when he felt bored. He saw the farmers in the fields and shouted, "Help! Wolves! My sheep are in danger! Help! Help!" The farmers once again rushed to the hill with their tools.

    [*The instructors may tell the story with few alterations, repeating the main plot – the little shepherd claimed his flock was being attacked by the wolves. The farmers rushed to help and returned to the fields.*]

    The following day, [*The instructors may tell the story with few alterations, repeating the main plot – the little shepherd claimed his herd was being attacked by the wolves. The farmers rushed to help and returned to the fields – with a relaxed tone.*]

    The instructor keeps repeating the same plot until the students complain about the repetitiveness of the story or give some kind of feedback. Then, the instructor can start the discussion.

Appendix A8

Worksheet: "Reflection Keys"
   Reflect upon the following questions:

What did I learn in this
lesson?

In what areas did I perform well?

What difficulties did I
encounter during the
process?

How can I apply in my daily
life what I have learnt?

How can these learning experiences help my
daily life / development?

Growth Puzzle

1. In what way(s) will the things I have learned in this lesson help me?
2. In which recent incident did I use the thinking perspectives learned in this unit?
   How did I use them?

Appendix B: Unit EC1.1 (Emotion Dictionary)

Construct

Emotional competence

Target Participants

Secondary 1 students

Unit Aim

To help students acquire a basic understanding of emotions and increase their awareness of their own emotional experiences

Learning Targets

1. To learn the basic concepts of emotions
2. To use different vocabulary to express different emotional experiences

Teaching Materials

- **Reference Materials for Instructors**: "Emotion EXPRESS" – Game Rules and Regulations (Appendix B1)
- **PowerPoint Slides**: "Emotion Masks" (Appendix B2)
- **Reference Materials for Instructors**: "Emotion Masks" (Appendix B3)
- **Worksheet**: "A Day Without Air-con" (Appendix B4)
- **Worksheet**: "First in Class" (Appendix B5)
- **Materials Requiring Preparation**: A5 white paper (about 30 pieces for each group) and envelopes (8 pieces)
- **Growth Puzzle**

Teaching Methods

- Group game
- Group discussion

Implementation Plan (30 min)   ✍ ✍ Primary activity
                                                                  ✍ Secondary activity

Activities	Procedures	Teaching materials
I. Warm-up activity	1. Begin this unit by asking students: 　(i)　How do you feel today? (Give feedback according to students' responses) 　(ii)　If the whole class was held in detention after school today, how would you feel then?	
(3 min)	2. Of course, students will give varied responses. Follow up by asking: "We always have different emotions like happiness or anger. Are emotions good or bad?" 3. Loosely wrap up students' comments and highlight the following points: 　(i)　Emotions are the feelings we generate toward the people around us and the situations we are in 　(ii)　Emotions are natural, and some are inborn 　(iii)　As part of daily life, we have to recognize our emotions and learn to express them properly 　(iv)　We need to master certain vocabulary in order to understand and express our emotions	
II. Group game	**Aim: To think about the vocabulary used to express emotions in our daily activities**	Appendix B1
Emotion EXPRESS ✍✍	1. Divide students into eight groups 2. Introduce the rules and regulations of the game (Appendix B1). Remind the class that a group is counted as a unit in this competition. Distribute the materials and use the PowerPoint slides for illustration (Appendix B2)	White paper 8 envelopes
(10 min)	3. When the game is completed, ask students to post their products on the blackboard. Based on the displayed products, summarize and conclude	Appendix B2
	4. Possible summary: Describing emotions or feelings is the basic skill of expressing emotions. When facing different situations, one may have more than one kind of feelings	Appendix B3
III. Group discussion	**Aim: To think about the vocabulary used to express emotions in our daily activities**	Appendix B4
If I were… ✍	1. Tell students about the requirements for this part (see Appendices B4 and B5). Then, distribute worksheets and "emotion masks" to students and let them discuss the questions listed on the worksheets	Appendix B5
(10 min)	2. Invite students to report their discussion results	
IV. Conclusion	3. Open discussion – ask students what they have learned in this unit and make a brief summary based on students' answers	
(2 min)	4. Repeat the vocabulary learned in this unit and encourage students to use these words in their daily lives	

<div align="right">(continued)</div>

(continued)

Activities	Procedures	Teaching materials
V. Self-reflection	1. Distribute the Growth Puzzle and invite students to take part in self-reflection	Growth Puzzle
(5 min)	2. Praise students for their participation during the lesson	
	*Students will share a family event in the next lesson. Ask them to prepare by recalling memorable events in their families	

Teaching Tips

1. **Warm-up activity**

   - Depending on the needs and interests of the students, instructors can use other questions to engage the class. The aim is to help students to be more aware of their own emotions
   - Instructors can share their emotions and let students guess what happened to cause such emotions. Then, lead students to think about the question, "What are emotions?"

2. **"Emotion EXPRESS"**

   - Students need to use vocabulary to express their emotions. If necessary, instructors can distribute the "emotion masks" first in order to help them finish this task
   - Instructors can vary the competition time according to students' responses and the time available. What is most important is getting students to think about positive, neutral, and negative emotions
   - The game is aimed at helping students to use different vocabulary to describe their emotions. Students can use the expressions that they use among their peers to express themselves. They are not expected to use "big" or "difficult" words. For less able students and those who lack confidence, instructors can show them the PowerPoint slides for reference. This may prevent some students from becoming frustrated when playing the game
   - Instructors can use other methods to count time (e.g., play a segment of music or pop songs)
   - There can be variation in collecting completed paper scripts, such as (a) using the chalk box or other empty boxes as the collection box and (b) placing the collection box at different locations inside the classroom each time so that each group has equal access to the collection boxes
   - Explain the game rules and regulations clearly (and check for understanding) before the game starts in order to avoid arguments about fairness
   - Instructors should praise the students openly and in detail (e.g., you all are doing well at using the vocabulary learned in this lesson, Group A is doing a good job with using "frustrated" to describe…)

3. **"If I were…"**

- Instructors should be aware of the group dynamics during the group discussion. Encourage silent members to participate in the discussion, and after class, offer counseling to students in need

- If the discussion session cannot be conducted in the lesson, instructors can post the worksheets inside the classroom or on the Internet to encourage students to discuss during their free time

Supplementary Activities (Optional)

Activity	Content	Recommendations
Emotion Diary	**Aim: To let students use the vocabulary learned** Ask students to write a diary entry to describe their emotions from the previous week; also ask them to mark in the entry any emotions-related vocabulary learned in this unit	If students have difficulties expressing and evaluating their emotions, instructors can provide them with a subject line (e.g., "My happiest day in life") or a newspaper article
My Parents	**Aim: To enhance students' awareness of others' emotions** Ask students to spend 1 week observing their parents' emotions and examining the reasons for such emotions. Encourage them to grasp a chance (with a caring attitude) to ask their parents about the reasons for their emotions and request parents to have a positive response	Instructors can let students share their assignments in other appropriate lessons

Appendix B1

Reference Materials for Instructors: "Emotion EXPRESS" – Game Rules and Regulations

1. Instructors will read aloud the situations (described below) one by one. Students have to think of a word or words that best describe their emotions in such a situation.

- Being teased by classmates about your body shape
- Receiving a love letter
- Parents giving you extra pocket money
- Being gossiped about by classmates for having a close relationship with a friend of the opposite sex
- Helping a classmate to solve a problem
- Staying alone at home for a week
- Winning an interclass competition
- A loved one passing away

- Your close friend goes astray
- Parents fighting with each other

2. Students have to write on the paper strips as many words or phrases as they can within the time limit. To complete the game, they need to put the paper strips into the envelopes and place them into a collection box.
3. Any group which exceeds the time limit must wait until the next round.
4. If there is not enough time to complete the game, instructors can reduce the number of "situations."
5. Instructors briefly share the answers written on the paper strips and award marks to each group according to the number of "appropriate" words and phrases used in the particular situations.

Appendix B2

PowerPoint Slides: "Emotion Masks"

Appendix B3

Reference Materials for Instructors: "Emotion Masks"

Appendix B4

Worksheet: "A Day Without Air-con"
To protect the environment, "A Day Without Air-con" will be launched at your school on the 1st of June. The school will turn off all the air conditioners that day, and students will be encouraged not to use air conditioners at home that night. With no air-conditioning and the temperature rising past 30 °C, how will you feel?

Please **write down** your thoughts and emotions in the boxes provided and also **draw** your emotional expression on the face.
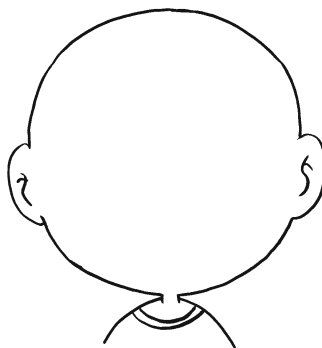
My thoughts are…   My emotions are…

Appendix B5

Worksheet: "First in Class"

It is time for the examination results to be released. Your academic performance is excellent and you are first in the class. All the teachers praise your good work. However, your best friend's result is far from satisfactory and may possibly not be promoted to Secondary 2 next year. In this situation, how will you feel?

Please **write down** your thoughts and emotions in the boxes provided and also **draw** your emotional expression on the face.
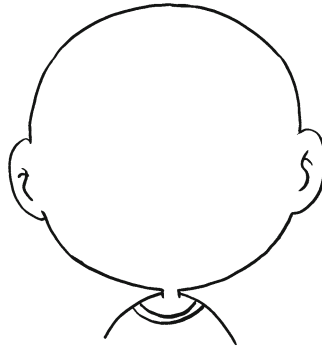
My thoughts are…   My emotions are…

Growth Puzzle

1. In which area(s) did I perform well in this lesson?
2. Which word best describes my emotions at this moment? Why?

Appendix C: Unit EC1.2: True Feeling

Construct

Emotional competence

Target Participants

Secondary 1 students

Aim

To help students identify different emotional experiences and different ways of emotional expression

Learning Targets

1. To distinguish between emotional states
2. To express and experience emotions in different ways

Teaching Materials

- **Reference Materials for Instructors**: "Pumping the Balloon" (Appendix C1)
- **Materials Requiring Preparation**: an air pump, 1–2 balloons, and white paper
- **Growth Puzzle**

Teaching Methods

- Class game
- Class sharing

Implementation Plan (30 min)   👍👏 Primary activity
                                                         👏 Secondary activity

Activity	Procedures	Teaching materials
I. Warm-up activity	1. Request students to be silent and pay attention to the following procedures	Appendix C1
Pumping the balloon	2. Use an air pump to fill in a balloon with air, and stop pumping when the balloon is going to burst. Ask students questions based on Appendix C1	An air pump
(3 min)	3. The air from the air pump represents one's emotions, whereas the balloon represents a person. If we do not know how to express emotions or try to suppress them inappropriately, it will affect our psychological health	1–2 balloons
	4. A person without emotions is like a flat balloon, giving others the impression that he/she is "cool" and "indifferent"	

(continued)

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Activity	Procedures	Teaching materials
II. Class game	**Aim: To understand different ways to express emotions and their pros and cons**	
Emotion Poll	1. Divide the blackboard into three columns, titled Happiness, Anger, and Sadness	
	2. Lead the class to brainstorm different kinds of emotion in these three categories, and write down their answers on the blackboard	
(8 min)	3. Discuss with students the pros and cons of different ways of expressing these emotions	
	4. Have the class vote on the best/most (un)usual way of expressing these emotions	
III. Class sharing	**Aim: To share emotions in class**	White paper
True Feeling	Give each student a piece of white paper. Ask them to spend 2–3 min writing down the most memorable event in their family (Note: The topic can be varied depending on the situation). Then:	
(12 min)	1. Share first a memorable event of your own (including your feelings and ways of expressing emotions)	
	2. Praise students' sharing during the class which deepens their understanding on each other. Then illustrate the focus of this unit – to explore ways of expressing emotions. Let students think of their usual ways of expressing emotions and whether these ways are appropriate	
IV. Conclusion	1. Conclude with the main points of this unit: (a) the importance of expressing emotions and (b) ways of expression and things to be aware of when expressing emotions	
(2 min)	2. Encourage students to express emotions properly in their daily lives	
V. Self-reflection	1. Distribute the Growth Puzzle and invite students to take part in self-reflection	Growth Puzzle
(5 min)	2. Praise students for their participation during the lesson	

Teaching Tips

1. **Warm-up activity**

- Instructors can walk among students while pumping the balloon in order to catch their attention and create a tense atmosphere
- The game is aimed at stimulating students' thinking. Instructors can raise questions according to students' intellectual level(s). For more able students, instructors can raise some abstract questions so as to extend their horizon of thinking. If students cannot instantly grasp the meaning of the game, instructors are encouraged to use a metaphor to explain the situation

- Instructors can make the balloon look like a person by decorating it with a face, arms, legs, etc.
- Before implementing this unit, instructors should think about and observe students' environment (e.g., relationships among students in class, things happening in school/class, students' emotions and their ways of expressing them)

2. **"Emotion Poll"**

- Before implementing this game, instructors can display the PowerPoint slides: emotion masks (Appendix B2 of EC1.1)
- Students may just know one way of expressing emotion. Instructors can lead students to discover other different ways of emotional expression (including verbal, nonverbal, and behavioral strategies)
- Before the poll, instructors should lead students to think about the appropriateness of different ways of expressing emotions and their effects on other people. In addition, instructors can set different awards for the criteria of voting (e.g., "the most comfortable award," "the best interpersonal relationship award," "the healthiest award") in order to help students think about issues that should be considered when expressing emotions
- Each student or each group has only one vote
- Instructors should be aware of students' views toward expressing emotions in a negative way (e.g., self-mutilation, drinking, etc). Encourage students to discuss the consequences and influences of expressing emotions in such negative ways. If the issue is a serious one, it should be dealt with separately after class
- If there is not enough time or instructors prefer to reserve more time for discussion, this part can be skipped

3. **"True Feeling"**

- Instructors can share some personal stories first as a warm-up
- It may be difficult for some students to recall a memorable event in their family in such a short time. Thus, as noted at the end of the previous unit, instructors can request in advance that students think about a family event for sharing in this unit. Or instructors can give some examples for students' references (e.g., a feeling toward a family member, arguments over a home move, the happiness during a family trip)
- Some students may resist talking about their families in class. Depending on the students' personalities and the teacher-student relationship, instructors can adjust this part accordingly. The discussion topic could also be "School Life" or "Friends"
- Students may focus too much on sharing their feelings rather than their *ways* of expressing emotions. They might not even have expressed their emotions when the event happened. Instructors should encourage students to share their feelings in order to find out possible ways of expressing emotions appropriately
- During sharing, boys tend to be silent because they are unaccustomed to expressing personal feelings. Instructors should give positive support, listen actively, and encourage sharing, particularly for the boys
- Encourage the whole class to give applause and praise each other after each sharing

- Instructors should be attentive to students' emotions during sharing. If a student suddenly becomes silent or irritated, instructors should show concern and let the student calm down (stop pursuing the question and allow him/her to go to the washroom for a while). Avoid situations where other students are giving too much attention to the student concerned, which will make that student feel pressure or affect the class running. Instructors can explain to other students that such emotional expression is natural and also encourage students to show concern for that student. After the lesson, instructors should follow up and make referral to counseling services, if necessary
- It should be noted that emotional expression and related strategies vary across cultures. As such, when the participating students are not Chinese/non-Westerners, the issue of "appropriate" emotional expression should be handled in a flexible manner

Supplementary Activities (Optional)

Activity	Content	Recommendations
Outdoor interview	**Aim: To know more about ways of expressing emotions** Divide students into groups of eight. Let each group study the topic "Ways to express emotions." Students can interview people around them (except those studying in the same form) and ask them their ways of expressing emotions. The content can include ways to express emotions, pros and cons of that way of expression, and the characteristics of a good listener	Post the interviews on the blackboard for others to read
Emotion thermometer	**Aim: To deepen the habits of expressing emotions** The whole class chooses 7–10 emotions and then creates a set of "emotion masks." Every day, the class votes to choose an emotion mask that can represent their emotion of that day and then posts the selected mask on the board as a way of expressing the class' emotion	1. Students can add intensity levels to the "emotion masks" 2. Students can provide instructors a set of emotion masks to let instructors show their emotions for that day

Appendix C1

Reference Materials for Instructors: "Pumping the Balloon" – Suggested Questions
The questions are not in order of priority.

Suggested questions	Suggested answers
1. What will happen if air continues to be pumped into the balloon?	The balloon will burst
2. Suppose the balloon represents a person and the air from the pump is the emotions. If we get filled up with too much emotion, what will happen?	It will generate negative physical and psychological damage. In extreme conditions, a person may even collapse or break down

(continued)

(continued)

Suggested questions	Suggested answers
3. What should we do to avoid psychological breakdown?	Ventilate our emotions/feelings
4. If the air is totally released from the balloon, what will happen to the balloon?	The balloon will lose its shape
5. What will happen if someone does not have emotions at all?	He/she will lose interests in things around him/her and will give others the impression of being "cool" or "indifferent"
6. Can you describe the relationship between a person and his/her emotion, using the metaphor of the balloon and the air pump?	The balloon is the person and the air from the air pump is his/her emotion

Growth Puzzle

1. What did I learn in this lesson?
2. What do I do when I am unhappy/happy/angry?

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Evaluation of the Project P.A.T.H.S. Using Multiple Evaluation Strategies

Daniel T.L. Shek

Introduction

There are at least three reasons why evaluation is important for human services. First, scientific evaluation can give ideas about whether an intervention is effective or not. This is important because there are critical periods in human development. The use of ineffective intervention will adversely affect developmental trajectories if the clients are in their critical period of development. Besides, research shows that many well-conceived programs may not work eventually and some may even generate adverse effects (Petrosino, Turpin-Petrosino, & Buehler, 2002; Petrosino, Turpin-Petrosino, & Finckenauer, 2000). Second, in an era of accountability, there is a need to demonstrate whether public fund is well-spent or not. Because public fund is always limited, there is a need to give support to those programs that have demonstrable positive effects. Third, program evaluation can help program developers to improve the design and implementation of the program. With the development of the evidence-based practice movement, there is a growing emphasis on scientific evaluation.

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Evaluation Design Issues

There are several issues underlying program evaluation design. The first design issue is the choice of evaluation. As there are many types of evaluation, researchers have to decide which one(s) should be used. For example, Patton (1987) pointed out there were more than 100 types of evaluation based on his "evaluation alphabet soup," which included audit focus, behaviors focus, cost-benefit, effectiveness, formative, goal-free, impact, judicial, kill-focus, licensure, meta, need, outcome, process, qualitative, responsive, summative, truth, utilization-focus, and validity evaluation. Ginsberg (2001) outlined the major forms of evaluation, including quantitative and qualitative approaches, cost-benefit analyses, satisfaction studies, needs assessment, single-subjects designs, experimental approaches and models, utilization-focused evaluation, empowerment evaluations, fraud and abuse detection, client satisfaction, and journalistic evaluation. Another commonly used dimension to differentiate different evaluation designs is experimental versus non-experimental approaches to evaluation. While the former approach commonly attempts to locate the effect of an intervention on the outcome variables and is considered a "gold" standard in evaluation, non-experimental approaches are commonly used to understand the process and contextual considerations in the developed program. It is noteworthy that the experimental approach to evaluation is commonly used in health research, while non-experimental approaches are widely used in social work contexts.

The second design issue is pertinent to what type(s) of data should be collected. On the one hand, evaluators may use tools such as questionnaires and structural behavioral observations to assess program effects (i.e., quantitative evaluation). On the other hand, evaluators may collect narratives, images, and words to understand the effects of the programs (i.e., qualitative evaluation). Patton (2008) pointed out that the summative/quantitative evaluation paradigm has the following characteristics: quantitative data (e.g., numbers, statistics), experimental designs, treatment and control groups, deductive hypothesis testing, objective perspective, evaluator detached from the program, use of independent and dependent variables, linear and sequential modeling, pre-post focus on change, probabilistic and random sampling, standardized and uniform procedures, fixed and controlled designs, and statistical analysis and generalization. For the qualitative/naturalistic paradigm, it has the attributes of qualitative data (e.g., narratives, descriptions), naturalistic inquiry, case studies, inductive analysis, subjective perspective, evaluators close to the program, holistic contextual portrayal, emphases on interdependence of systems, viewing change as dynamic and ongoing, purposeful sampling of relevant cases, focus on uniqueness and diversity, emergent and flexible designs, thematic content analysis, and extrapolations. A survey of the literature shows that there are a growing number of studies combining both quantitative and qualitative evaluation data (i.e., mixed-methods studies).

The third design issue is who should be involved in the evaluation. In the conventional experimental approach, focus is normally put on the outcomes of the program

participants with the "neutral" involvement of the evaluators. In fact, most evaluation studies focus on the program participants alone, assuming that understanding the views of the program implementers is "unscientific." Nevertheless, in many evaluation models, there is an emphasis on the importance of involving different stakeholders as far as possible. For example, in qualitative evaluation approaches, it is maintained that different people in the evaluation context, including the evaluators and program participants, are important stakeholders. In the utilization-focus evaluation model (Patton, 2008), involvement of different stakeholders is an integral component of evaluation. Similarly, involvement of stakeholders is also upheld in the Joint Committee on Standards for Educational Evaluation (1994).

The fourth issue is when to collect the evaluation data. For most evaluation designs, data from the program participants may simply be collected at a single time point. For example, the program participants may simply be interviewed at the end of the program to describe their experiences in the program. On the other hand, participants may be followed up longitudinally so that their changes can be monitored. In more complex evaluation designs, there can be more than one posttest measurements involved. Ideally speaking, long-term evaluation designs involving measurements at different points of time would be desirable because time-related data can reveal changes in the participants.

With reference to quantitative and qualitative evaluation, it would be ideal to combine them into a single evaluation design (i.e., mixed-methods design). However, in order to do this, one must clearly spell out one's philosophical stand with respect to the combination of these strategies. There are at least two paradigms upon which an evaluator can combine the quantitative and qualitative evaluation strategies. They are post-positivism and pragmatism.

According to Denzin and Lincoln (2011), critical realism (i.e., "real" reality can only be imperfectly and probabilistically apprehended) is the ontology of post-positivism. As for the epistemology of the paradigm, a modified dualist/objectivist position is adopted, with an emphasis on critical tradition and community. For the "acceptable" forms of research methods under post-positivism, experimental methods and non-experimental methods could be included, with the focus on critical multiplism. Concerning the question of whether the combined methods and data are credible, one common way of addressing this question is to establish the credibility of the findings through the method of triangulation (Mathison, 1988), which is a concept derived from navigation and military disciplines. Denzin (1978) used the term "triangulation" where different types of data based on different methodologies are used to examine the same phenomenon. The basic assumption of triangulation is that each research method has its biases and limitations. Hence, by using more than one evaluation strategies, data sources, and stakeholders, biases and errors associated with a unique method will be revealed and canceled out. In other words, through the process of seeking convergence of results on the same phenomenon under observation based on different strategies, data, researchers, and settings, the "truth" can be revealed.

The second philosophical paradigm that supports mixing quantitative and qualitative evaluation strategies is pragmatism. Under this philosophy, so long as the

evaluation can yield "useful" findings, such a design should be endorsed. Hence, if mixing quantitative and qualitative data can generate a fuller picture of the phenomena under investigation, one should mix different evaluation methods. According to Datta (1994), there are five convincing and practical reasons for combining the positivistic and naturalistic approaches on evaluation: (a) both paradigms have been used for a long time, (b) both approaches are used by many evaluators and researchers, (c) both approaches have been supported by funding, (d) public policies have been influenced by both approaches, and (e) both paradigms offer insightful learning points. Under the utilization-focused evaluation (Patton, 2008), quantitative evaluation (thesis), qualitative evaluation (antithesis), and utilization-focused evaluation (synthesis) are different approaches to evaluation. He also pointed out that with the emphasis on the intended use of evaluation data by intended persons, it is natural and desirable to mix different evaluation methods to suit different evaluation purposes. There was a growing trend in using mixed methods in social sciences (Greene & Caracelli, 1997; Greene, Caracelli, & Graham, 1989; Tashakori & Teddlie, 2010). In this chapter, five major evaluation strategies adopted in the Project P.A.T.H.S. are presented below.

Strategy 1: Objective Outcome Evaluation

Experimentation as a form of evaluation strategy is commonly employed in the health and prevention field. The basic aim of an experiment is to establish the cause-effect relationship between two or more variables through the manipulation of independent variable(s), measurement of dependent variable(s), and control of unwanted effects of extraneous variable(s). While independent variables are those factors manipulated or varied by the experimenter (e.g., presence versus absence of an intervention), dependent variables are factors measured or observed by the experimenter (e.g., mental health and academic performance). At the same time, experimenters should strive to control or remove those variables that the experimenter is not interested in studying but their existence might affect the causal inference of the findings (i.e., extraneous variables). Adopting an experimental approach in the field of positive youth development, the effect of a developed program on the dependent variables (e.g., holistic youth development) is examined, while unwanted factors such as age differences between the experimental group and control group are controlled.

There are different types of experimental design. In pre-experimental designs such as the one-group pretest-posttest design, differences in pretest and posttest scores are examined to infer the effect of intervention. Although this design is highly susceptible to threats of internal validity, it is commonly used in the practice context. Thyer (2002) pointed out that there are many myths associated with this design (e.g., "you must control for the most relevant threats to internal validity" and "you must randomly assign clients to various control and experimental groups") and argued that pre-experimental studies are valuable research designs in social work.

Of course, it would be methodologically superior if one can adopt a true experimental design with an experimental group (i.e., condition in which experimental treatment or levels of treatment is/are applied) and a control group (i.e., condition in which the experimental treatment or levels of treatment is/are withheld so as to compare with the experimental group). To determine whether an intervention leads to treatment effect, the study participants are usually randomly selected and randomly assigned to the experimental group and control group. Through randomization, it is believed that the intrinsic differences between the experimental group and control group could be minimized. In the context of human services, true experiments are commonly used to assess treatment effects, particularly in the case of clinical controlled trials (CCTs). Meinart, Heinz, and Forman (1983) defined a CCT as a planned experiment which is intended to evaluate the efficacy of an intervention in human beings. The usual strategy is to enroll, treat (or not treat), and follow up a treatment group and a control group over time to evaluate the outcomes which can be used to reflect the intervention effect. According to Cnaan (1991), there are several elements of clinical controlled trials, including the following: (a) it is implemented in human beings, (b) it is designed to evaluate the effectiveness of one or more modes of intervention, (c) a detailed protocol is prepared, (d) random selection of subjects in different groups, (e) "blind" treatment is provided when possible, (f) multi-center arrangement is usually involved, (g) baseline data are usually collected, (h) outcome data are continuously collected, and (i) there is use of random selection and assignment to ensure a high level of generalizability of the findings.

While it is easy to conduct randomized clinical trials in biomedical and pharmacological studies, it is relatively more difficult to do this in the human services context for several reasons. First, for some client populations such as delinquent youths, it would be difficult to randomly select the participants because it is impossible to determine the population. Second, random assignment of the subjects to the control group may be difficult for some client groups because of the need for immediate treatment (e.g., clients with depressive symptoms). Third, it is very expensive to conduct randomized controlled trials in human services. As McCall, Green, Strauss, and Groark (1998) pointed out, "methodologically, it is now acknowledged that conducting robust true experiments in the field—the scientific ideal described at the beginning of this chapter—is extremely difficult and often impossible" (p. 982). Hence, some researchers resorted to adopting quasi-experimental designs (i.e., without random selection and/or random assignment) to examine effects of intervention on outcomes.

In the field of youth development, there is a growing trend in using randomized experiments to examine positive youth development and prevention programs. Catalano, Berglund, Ryan, Lonczak, and Hawkins (2004) showed that among the 25 successful programs identified in the literature, 16 programs (64 %) were based on experimental designs with randomization of subjects to different groups, and 9 programs (36 %) were based on quasi-experimental designs.

In the Project P.A.T.H.S., the one-group pretest-posttest design was used in the first year of the Experimental Implementation Phase to see whether positive changes existed in the program participants. For the Full Implementation Phase, a randomized group

trial was conducted, with 24 pairs of schools initially recruited to join the evaluation study in the 2006/2007 school year. In each pair of schools, the background characteristics were similar, and they were drawn from the school list provided by the Education Bureau of the Government of the Hong Kong Special Administrative Region, China. For the students in the experimental schools, they would join the Tier 1 Program of the Project P.A.T.H.S. for 3 years. For the students in the control schools, they would not join the Project P.A.T.H.S. at all. A total of eight waves of data were collected (pretest and posttest at Secondary 1, pretest and posttest at Secondary 2, pretest and posttest at Secondary 3, posttest at Secondary 4, and posttest at Secondary 5).

As far as the outcomes of the study are concerned, positive youth developmental outcomes were used. It is noteworthy that effort to develop positive youth development indicators is still at its infancy. As pointed out by Scales, Benson, Leffert, and Blyth (2000), "studies of adolescent behavior are dominated by naming, measuring, and predicting problem behaviors … empirically, the territory of positive developmental outcomes, as contrasted with that of risk behaviors, has been less explored" (p. 27). In the present study, as the 15 positive youth development constructs covered in the curriculum were modeled after the common attributes in the successful programs reviewed by Catalano et al. (2004), an indigenous scale was developed to assess bonding, resilience, social competence, emotional competence, cognitive competence, behavioral competence, moral competence, self-determination, spirituality, self-efficacy, clear and positive identity, beliefs in the future, recognition for positive behavior, and prosocial norms (Shek, Siu, & Lee, 2007). Besides, indicators of adolescent risk behavior were used.

Regarding analyses of the longitudinal data, individual growth models were used. While generalized linear models (GLMs) such as analysis of variance (ANOVA) and analysis of covariance (ANCOVA) were commonly used to examine changes in longitudinal research designs, there are several limitations of the related analyses. First, these methods would only estimate the model accurately in a balanced, repeated measures design with equal group size. In unbalanced repeated measures designs (e.g., attrition in longitudinal design), inflated Type 1 error may occur. Second, the assumption of independence in observations may not be held in generalized linear models because data collected across time tend to be correlated (Shek & Ma, 2011). Hence, individual growth curve models were used to model within-person systematic change and between-person differences in developmental outcomes across different measurement waves over time, focusing on the differences in rates of changes between the experimental group and control group.

Strategy 2: Subjective Outcome Evaluation

Subjective outcome evaluation or client satisfaction approach is a popular approach of evaluation utilized by human service professionals in different fields, including psychology, social work, medicine, allied health professions, and many service industries. Typically, participants are asked to assess their satisfaction regarding

the program, including its format, implementation process, workers, and benefits. The clients may also be asked whether they would recommend the program to others with similar needs.

Both quantitative and qualitative approaches have been used to assess subjective outcomes among the program participants. As far as objective measures are concerned, although a set of items or even a single item has been used by researchers to assess subjective outcomes, standardized rating scales such as the Consumer Satisfaction Questionnaire (Holcomb, Adams, Ponder, & Reitz, 1989), the Client Satisfaction Questionnaire (Attkisson & Zwick, 1982; Vandiver, Jordan, Keopraseuth, & Yu, 1995; Walsh & Lord, 2004) and the Subjective Outcome Scale (Shek, 2010) have been used to assess client satisfaction. Some of these structured rating scales (e.g., Shek, 2010) are multidimensional in nature, and they could yield both global and dimensional scores on client satisfaction. Concerning qualitative evaluation, different approaches such as interviews and focus groups have been used. In client satisfaction questionnaires, qualitative data are commonly collected through the use of open-ended questions.

Despite its popular usage in the contexts of service industries, there are many criticisms of the subjective outcome evaluation approach to evaluation (Weinbach, 2005). First, as the assessment is subjective, the program participants may not tell the truth. Second, as client satisfaction survey is usually carried out at the end of the program, the approach may miss those who have dropped out from the program. By relying on the responses of those who complete the program, bias may be involved (i.e., those who stay until the end must like the program). In addition, convenience samples rather than random samples are usually used in client satisfaction surveys. Third, as program recipients may feel grateful or they feel appreciated to be asked, they tend to play the role of "good" program participants by giving good comments. Fourth, as subjective outcome evaluation always generates more positive than negative responses, the objectivity of its results is doubtful. Fifth, there is a lack of standardized measures of client satisfaction in the literature (Royse, 2004). Finally, there is a common illusion that client satisfaction equals successful intervention. Regarding the last problem, Weinbach explicitly warned that "the major problem of using client-satisfaction surveys as indicators of intervention effectiveness, or of quality of a service, is that satisfaction with services and successful intervention are not the same" (p. 38).

On the other hand, there are arguments supporting the use of subjective outcome evaluation. First, unlike randomized trials, it is economical. Most of the time, this evaluation can be easily done by simply printing the questionnaires and analyzing the data using Excel. Second, it can be easily carried out by personnel without much research training if we simply focus on the frequencies of "satisfied" or "dissatisfied" responses. Unlike evaluation utilizing experimental paradigms, there is no need to use sophisticated statistical analyses in subjective outcome evaluation. Third, if validated measures of client satisfaction are used, this approach would yield useful findings.

The final argument is based on the observation that clients' perceived benefits of the program were moderately associated with objective outcome evaluation

findings. For example, while LaSala (1997) reported that "client satisfaction was found to be correlated with client report of improved ability to handle problems, whether clients would recommend services to others, whether the fee was considered fair, and client and therapist ratings of global improvement" (p. 54), Walsh and Lord (2004) commented that "a small number of studies have used other outcome measures and failed to find a strong relationship between higher client satisfaction and other indicators of successful intervention" (p. 41). In an experimental study examining the relationship between objective outcome evaluation and subjective outcome evaluation in 3,298 Chinese secondary school students, Shek (2010) showed that subjective outcome evaluation scores were significantly correlated with posttest objective outcome scores and difference scores; they also predicted changes in Chinese Positive Youth Development Scale (CPYDS) scores across time. As pointed out by Royse (2004), "despite the generally positive bias and the problems associated with collecting representative samples of clients, there is much to recommend client satisfaction studies as one means of evaluating a program. Because professionals do not experience the agency in the same way as the clients, it is important to ask clients to share their experiences" (pp. 264–265).

It is noteworthy that subjective outcome evaluation is usually carried out for the program participants without due recognition of the evaluation of the program implementers. However, there are arguments supporting the collection of subjective evaluation data from the program implementers. First, there are arguments emphasizing the views of the program implementers. According to utilization-focused evaluation, it is important to understand the views of the stakeholders (Patton, 2008). Second, as program implementers are usually more experienced than the clients, it can be argued that their views may be more accurate than those of the clients. Third, the inclusion of subjective outcome evaluation based on the workers' perspective can give the workers a sense of fairness and respect, which would enhance the morale of the workers. Fourth, subjective outcome evaluation based on the perspective of the program implementers can help to provide a transparent and accurate picture on the implementation quality, which can further engage the program implementers in a meaningful manner. In the present project, quantitative and qualitative subjective outcome evaluation findings based on the program participants and implementers were collected by the Research Team.

Strategy 3: Process Evaluation

In many fields of evaluation such as prevention of adolescent developmental problems evaluation, evaluators usually put their attention on outcomes. While it is important to look at changes in the program participants in terms of outcomes, there are views suggesting that it is equally important to know what takes place in the program implementation process. According to Scheirer (1994), process evaluation is "the use of empirical data to assess the delivery of programs …. Process evaluation verifies what the program is, and whether or not it is delivered as intended to

the targeted recipients and in the intended dosage" (p. 40). Unfortunately, research effort on process evaluation is not widespread. For example, Linnan and Steckler (2002) commented that there are "a plethora of reports about interventions that have successful outcomes. A limited number of studies, however, disentangle the factors that ensure successful outcomes, characterize the failure to achieve success, or attempt to document the steps involved in achieving successful implementation of an intervention" (p. 1). There are empirical studies showing that there is huge research gap in process evaluation. Durlak (1997) found that less than 5 % of 1,200 published studies covered findings on program implementation. In a meta-analysis of evaluation studies of primary and early secondary prevention programs published between 1980 and 1994, Dane and Schneider (1998) showed that only 39 out of 162 evaluation studies documented procedures of fidelity. Domitrovich and Greenberg (2000) also reported that among the 34 effective prevention programs under review, only 21 % examined whether the effective intervention was related to outcomes. These findings clearly showed that systematic research on process evaluation is highly insufficient.

There are several arguments for conducting process evaluation. First, as nonadherence to the program activities would lead to absence of program effects, process evaluation can guard against Type III error. In fact, an understanding of the program implementation quality can help to interpret the program effects. Second, process evaluation can give some indication about the degree of fidelity in the implementation process. Third, process evaluation can help program developers to understand whether the intended targets receive the program. Fourth, process evaluation can help to identify contextual factors that contribute to program success or failure. Finally, program developers can use process evaluation findings to improve the program content and implementation process. In the Project P.A.T.H.S., systematic observations were planned for the teaching units randomly selected.

Strategy 4: Qualitative Evaluation

While "quantitative" is the "gold standard," there is growing discontent with this approach to evaluation (Patton, 2002). Cook (2003) pointed out that "critics contend that experimenters value uncertainty reduction about the cause so much that conservative criteria are used to protect against wrong inferences, with the result that many effective programs are judged to be ineffective" (p. 135). A similar view was also expressed by Carr (1994) that "the opposing argument, suggesting the invalidity of numerical findings, is that data not displaying significance are often neglected, or alternatively attention is centered on a minority of the respondents leaving the majority unexplored" (p. 718). At the same time, there are views suggesting the importance of carrying out qualitative studies. Patton (1990) pointed out that there are several characteristics of qualitative research: naturalistic inquiry, inductive analysis, holistic perspective, qualitative data, personal contact and insight, dynamic systems, unique case orientation, context sensitivity, empathic neutrality, and design flexibility. According to

Janesick (1998), there are 11 characteristics of qualitative research. First, it attempts to understand the whole or large picture (i.e., holistic understanding). Second, it explores relationships within a culture or system. Third, it is personal, mostly involving face to face and immediate interactions. Fourth, it focuses on understanding rather than prediction. Fifth, it requires prolonged engagement. Sixth, time in analysis would be roughly the same as the time in the field. Seventh, it enables the researcher to generate working models based on the data observed. Eighth, it expects the researcher to become a research instrument. Ninth, it takes ethical concerns into account. Tenth, a qualitative researcher describes the role of researcher and his/her own biases and ideological preference. Finally, it requires ongoing analysis of the data.

In this project, qualitative data based on different methods were collected. First, focus groups with students randomly drawn from the participating schools regarding their views of the program, implementers, and effectiveness were conducted. Second, focus groups with program implementers (including teachers and social workers) randomly drawn from the participating schools regarding their views of the program, implementers, and effectiveness were conducted. Third, students were randomly selected to write weekly diaries about their experiences about the program after completion of the program. Finally, in-depth interviews were conducted to understand the views and experiences of some teachers.

Strategy 5: Evaluation Based on the Repertory Grid Test

One of the evaluation strategies adopted in this study is based on personal construct psychology. According to Kelly (1955), individuals make sense of the world through their personal constructs, which are psychological templates by which the individual interprets the external world (e.g., the Project P.A.T.H.S. is "meaningful" and playing computer games is "not meaningful").

One technique within personal construct psychology is the repertory grid test which has been used in the clinical, organizational, educational, and business contexts (Shek & Lam, 2011). Researchers have used the repertory grid test to understand the self-identity system in evaluation studies (Stanley, 1985). The typical design is to include "self before intervention" and "self after intervention" in the grid. Besides, elements of positive attributes (e.g., "ideal self") or negative attributes (e.g., "an unsuccessful person") will be used. The typical hypotheses are as follows: (a) if the intervention is effective, the person's self after joining the program would be closer to the successful roles than the person's self before joining the program; and (b) if the intervention is effective, the person's self after joining the program would be farther away from the unsuccessful roles than the person's self before joining the program. Several evaluation studies utilizing this methodology have been used in the Chinese contexts. Luk and Shek (2006) used the repertory grid test to examine changes in ex-mental patients joining a holistic psychiatric rehabilitation. They showed that the ex-mental patients had better construction of their selves after joining the program. Ng and Shek (2001) examined changes in the drug addicts at

different stages of the religious conversion process. They found that with conversion, the self-identity system of the drug addicts improved. Finally, Shek and Lam (2011) showed that compared with the self before joining a drug prevention program, the self-identity system of the program participants became more positive, and they identified themselves less as drug addicts. In the present study, repertory grid test was carried out among the program participants to look at the changes in their selves after joining the program.

Evaluation Design of the Project: Summary and Unique Features

With reference to the Tier 1 Program of the project, several evaluation methods based on the preceding discussion are summarized as follows (Shek & Sun, 2012):

1. *Objective outcome evaluation* (*one-group pretest-posttest design*): In the first year of the Experimental Implementation Phase, changes in the participants in the Tier 1 Program were examined.
2. *Objective outcome evaluation* (*randomized group trial*): In the Full Implementation Phase, experimental schools and control schools were randomly selected to participate in a randomized group trial in 2006/2007 school year. Analyses of data collected at different time points using individual growth curve models controlling for differences between the two groups in terms of pretest scores, personal variables and random effects of schools were carried out.
3. *Subjective outcome evaluation* (*program participants*): Students were invited to complete a validated subjective outcome evaluation form after completion of the program to understand their perceptions of the program, the implementers, and benefits of the program.
4. *Subjective outcome evaluation* (*program implementers*): Program implementers were invited to complete a validated subjective outcome evaluation form after completion of the program to understand their perceptions of the program, the implementers, and benefits of the program.
5. *Subjective outcome evaluation* (*secondary data analyses*): To gain an in-depth understanding of the impact of the project, program implementers were invited to write down five conclusions regarding the project based on the findings collected from the program participants and program implementers in their reports. Secondary data analyses of the conclusions drawn by the program implementers were carried out.
6. *Process evaluation*: In process evaluation, systematic observations were carried out by trained research assistants in randomly selected schools to understand the program implementation details.
7. *Interim evaluation*: To understand the process of implementation, interim evaluation was conducted by randomly interviewing roughly half of the participating schools in the Experimental Implementation Phase or the Full Implementation Phase.

8. *Qualitative evaluation* (*focus groups based on students*): Focus groups involving students based on schools randomly selected from the participating schools were carried out in previous years.

9. *Qualitative evaluation* (*focus groups based on program implementers*): Focus groups involving program implementers based on schools randomly selected from the participating schools were conducted in the project.

10. *Qualitative evaluation* (*qualitative interviews*): In-depth interviews involving program implementers based on schools randomly selected from the participating schools were also conducted in the project.

11. *Evaluation based on student weekly diaries*: After the completion of the Tier 1 Program, students were randomly selected from the participating schools to write a reflective journal in the form of weekly diary to reveal their perceptions and feelings regarding the Tier 1 Program and the related benefits.

12. *Evaluation based on repertory grid test*: At the end of the Full Implementation Phase, students were randomly selected from the participating schools to complete repertory grid tests to understand how the participants perceived the changes in their identity at different points of time.

There are several unique features of the evaluation approach adopted in this study. First, consistent with the principle of triangulation, a wide range of data were collected. These included objective outcome evaluation data, subjective outcome evaluation data (data collected via client satisfaction approach), process evaluation data, qualitative data, and repertory grid test data. Through triangulation by different data types (e.g., objective versus subjective outcome evaluation data), evaluation methods (e.g., objective outcome evaluation, subjective outcome evaluation, qualitative evaluation, evaluation based on repertory grid tests, and process evaluation), researchers (e.g., inter-rater reliability among different observers), and data sources (e.g., views of workers versus students), a more all-round picture could be produced.

The second unique feature of the evaluation design is that longitudinal data were collected from the evaluation study. Shek and Yu (2011) showed that there was a severe lack of longitudinal studies in the Chinese contexts. As such, the Project P.A.T.H.S. is a pioneer attempt in this area. The third unique feature is that a validated measure of positive youth development in Chinese adolescents was used in the longitudinal study. To assess positive youth development in an objective manner, the Chinese Positive Youth Development Scale was developed. The early work of Shek et al. (2007) showed that the scale possessed good psychometric properties. Shek and Ma (2010) further showed that the scale reliably assessed 15 dimensions of positive youth development which could be further subsumed under four dimensions. The final unique feature of the study is that different stakeholders were involved in the evaluation as far as possible. Besides program participants, program implementers were also involved in the evaluation. In short, evaluation of the Project P.A.T.H.S. is based on multiple evaluation methods which attempted to give a comprehensive and all-round picture on the effectiveness of the program in a Chinese context.

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Objective Outcome Evaluation of the Project P.A.T.H.S.: Longitudinal Study Based on Indicators of Positive Youth Development

Daniel T.L. Shek and Cecilia M.S. Ma

Introduction

Positive youth development refers to the nurturance of developmental assets and abilities in adolescents (Klein et al., 2006; Lerner, Phelps, Forman, & Bowers, 2009; Roth & Brooks-Gunn, 2003). It focuses on promotion of adolescents' strengths in different ecological contexts, such as home, schools, and community (Amodeo & Collins, 2007; Commission on Positive Youth Development, 2005). Empirical evidence supports its effectiveness in promoting personal and social competencies and reducing levels of negative behaviors (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Durlak et al., 2007; Lerner et al., 2005). Despite the growing number and popularity of positive youth development programs in the global context, the impact of these programs on youth development is limited in Chinese communities. In a recent review of preventive and positive youth development programs using experimental (or quasi-experimental) designs in Asian countries, Shek and Yu (2011a) showed that the number of validated programs was terribly low and the majority of the programs focused on substance abuse rather than other mental health problems. Besides, little evaluation effort was invested in studying the longitudinal effects of prevention and positive youth development programs as compared to the Western countries. Such development is not desirable in view of the argument that intervention programs should be culturally designed with considerations of the target

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population's needs and preferences (Commission on Positive Youth Development, 2005; National Research Council and Institute of Medicine, 2002; Pittman, Irby, Tolman, Yohalem, & Ferber, 2003; Roth & Brooks-Gunn, 2003). There is also an appeal to develop relevant measures of positive youth development. Researchers noted that the lack of sound and valid measurement in evaluating different aspects of positive youth development constructs might hinder program dissemination and thereby widen the gap between research and practice (MacDonald & Valdivieso, 2000; Moore, Evans, Brooks-Gunn, & Roth, 2001; Roth & Brooks-Gunn, 2003).

With reference to different Chinese communities, the Project P.A.T.H.S. was identified as an effective positive youth development program. Based on six waves of data in the junior secondary school students (i.e., Secondary 1 to Secondary 3), individual growth curve analyses showed that participants in the experimental schools reported that they generally had better development than did the participants in the control schools (Shek & Ma, 2011a). Also, they had lower levels of risk behavior than did their control school counterparts (Shek & Yu, 2011b). These findings were further sustained over a period of 2 years after the termination of the project at Secondary 3 (Shek & Ma, 2012; Shek & Yu, 2012).

Although the existing findings for objective outcome evaluation are very positive, there are two shortcomings. First, as it is reasonable to assume that not all program participants would respond positively to the program, it would be illuminating to focus on the changes in the students who perceived the program to be effective. As pointed out by Campbell and Stanley (1963), "we must increase our time perspective, and recognize that continuous, multiple experimentation is more typical of science than once-and-for-all definitive experiments. The experiments we do today, if successful, will need replication and cross-validation at other times under other conditions before they can become an established part of science, before they can be theoretically interpreted with confidence" (p. 3). As there are very few longitudinal evaluation studies using objective outcome indicators in different Chinese contexts, the present study attempts to compare those experimental school participants who perceived the program to be effective with the control school participants. Second, Shek, Siu, and Lee (2007) constructed the Chinese Positive Youth Development Scale (CPYDS) for assessing positive youth development in Chinese adolescents. Although the factor structure of the CPYDS was tested with the Wave 1 data (Shek & Ma, 2010), more research is needed to test the validity of this instrument. Therefore, another purpose of this study is to examine the factorial structure of the Chinese Positive Youth Development Scale (CPYDS) using the data collected at Wave 2.

Methods

Participants and Procedures

During 2006–2011, a total of 7,846 Secondary 1 students (equivalent to Grade 7) were recruited from 48 schools (i.e., 24 experimental schools and 24 control schools). Students were measured at baseline in the fall of 2006 (Wave 1) and were

Table 1 Number of collected questionnaires across waves

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8
N (schools)	48	47[a]	44[b]	44	43[c]	43	43	43
N (participants)	7,846	7,388	6,939	6,697	6,876	6,733	6,116	5,934
Control group	3,797	3,654	3,765	3,698	3,757	3,727	3,442	3,272
Male	1,936	1,876	1,896	1,888	1,874	1,894	1,770	1,663
Female	1,613	1,619	1,666	1,599	1,682	1,679	1,592	1,554
Experimental group	4,049	3,734	3,174	2,999	3,119	3,006	2,674	2,662
Male	2,154	1,998	1,691	1,548	1,632	1,591	1,408	1,427
Female	1,745	1,571	1,283	1,259	1,312	1,278	1,155	1,191
% of successfully matched	98 %	96 %	97 %	98 %	99 %	97 %	93 %	91 %

[a]1 Experimental school (n=207) had withdrawn after Wave 1
[b]3 Experimental schools (n=629) had withdrawn after Wave 2
[c]1 Experimental school (n=71) had withdrawn after Wave 4

then followed longitudinally across waves (Wave 2: Spring 2007; Wave 3: Fall 2007; Wave 4: Spring 2008; Wave 5: Fall 2008; Wave 6: Spring 2009; Wave 7: Spring 2010; Wave 8: Spring 2011). A total of 3,820 students completed all 8 waves of the study (49 %). The number of completed questionnaires collected at each wave can be seen in Table 1. At pretest, measures of positive youth development and risk behavior were administered. The same measures were then used in different posttest sessions, together with 20 items assessing the perceptions of the participants. The number of participants in the experimental group who found the program to be effective was 2,339 (62.6 % at Wave 2).

Instruments

Chinese Positive Youth Development Scale (CPYDS)

The CPYDS is an 80-item self-report instrument developed to assess positive youth development. The CPYDS has 15 subscales, including bonding (6 items), resilience (6 items), social competence (7 items), recognition for positive behavior (4 items), emotional competence (6 items), cognitive competence (6 items), behavioral competence (5 items), moral competence (6 items), self-determination (5 items), self-efficacy (2 items), clear and positive identity (7 items), beliefs in the future (3 items), prosocial involvement (5 items), prosocial norms (5 items), and spirituality (7 items). The details of the items can be seen in Shek et al. (2007). Based on the Wave 1 data, Shek and Ma (2010) showed that these 15 primary factors can be represented by four secondary factors (i.e., four general dimensions). The internal consistencies of these measures can be seen in Table 2.

Following the practice in the previous studies (Shek, 2006), different composite indices derived from the scale were used to assess positive youth development. First, the mean of the total mean scores based on 10 subscales (CPYDS-10)

Table 2 Internal consistency and mean inter-item correlations for all variables

	Wave 1		Wave 2		Wave 3		Wave 4		Wave 5		Wave 6		Wave 7		Wave 8	
	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]
BO	.83	.45	.85	.49	.86	.51	.88	.55	.88	.54	.88	.55	.86	.51	.87	.52
RE	.82	.44	.86	.50	.88	.54	.88	.55	.88	.55	.89	.56	.86	.51	.87	.52
SC	.83	.42	.86	.47	.87	.51	.88	.52	.87	.50	.89	.53	.87	.49	.87	.51
PB	.76	.44	.80	.51	.83	.55	.84	.58	.83	.56	.85	.58	.82	.54	.84	.57
EC	.83	.44	.85	.48	.86	.51	.86	.51	.86	.51	.87	.52	.85	.49	.86	.50
CC	.84	.47	.86	.52	.87	.54	.88	.55	.88	.54	.88	.56	.86	.52	.86	.52
BC	.76	.38	.80	.44	.82	.47	.83	.50	.82	.48	.83	.49	.81	.46	.81	.46
MC	.78	.37	.79	.39	.81	.42	.82	.43	.80	.41	.82	.44	.79	.39	.79	.39
SD	.76	.40	.80	.44	.82	.48	.82	.48	.81	.47	.82	.47	.80	.46	.81	.46
SE	.50	.34	.56	.39	.58	.41	.61	.44	.59	.42	.61	.43	.61	.44	.61	.44
CPI	.84	.43	.85	.45	.87	.48	.87	.49	.86	.47	.87	.48	.85	.46	.86	.46
BF	.82	.61	.83	.62	.84	.64	.84	.65	.84	.65	.85	.66	.79	.57	.81	.61
PI	.83	.49	.83	.50	.86	.55	.86	.54	.85	.52	.86	.55	.86	.54	.85	.54
PN	.77	.40	.80	.45	.81	.46	.81	.47	.81	.46	.81	.46	.82	.47	.81	.47
SP	.88	.51	.89	.56	.91	.60	.91	.62	.91	.60	.92	.62	.91	.61	.91	.61

Note: BO bonding, *RE* resilience, *SC* social competence, *PB* recognition for positive behavior, *EC* emotional competence, *CC* cognitive competence, *BC* behavioral competence, *MC* moral competence, *SD* self-determination, *SE* self-efficacy, *CPI* clear and positive identity, *BF* beliefs in the future, *PI* prosocial involvement, *PN* prosocial norms, *SP* spirituality

All parameters were significant (*p* < .05)

[a]Mean inter-item correlation

assessing psychosocial competence and strengths was used (i.e., resilience, social competence, emotional competence, cognitive competence, behavioral competence, moral competence, self-determination, self-efficacy, beliefs in the future, and clear and positive identity). Second, it can be argued that constructs including spirituality, prosocial norms, bonding, and self-determination are different from the rest of the scales, and thus a summation of 11 subscales (CPYDS-11) was tested. Third, an indicator based on the mean scores of 12 subscales (i.e., resilience, social competence, emotional competence, cognitive competence, behavioral competence, moral competence, self-determination, self-efficacy, beliefs in the future, prosocial norms, prosocial involvement, and clear and positive identity) was assessed. Fourth, the mean of the total mean scores based on 14 subscales (excluding self-efficacy) was used as an overall measure of positive youth development (CPYDS-14). Lastly, based on items analyses, a 9-item measure was derived from social competence, emotional competence, behavioral competence, and cognitive competence subscales (CPYDS-4).

Subjective Outcomes Scale (SOS)

Twenty items were used to assess the participants' satisfaction with the program and instructor as well as their perceived benefits of the program at posttest (i.e., Wave 2 data). The response options included "strongly disagree," "moderately disagree," "slightly disagree," "slightly agree," "moderately agree," and "strongly agree." Reliability analysis showed that this measure is reliable ($\alpha = .97$). Item 20 of this scale is "Overall speaking, the program was beneficial to my development." In this study, students in the experimental group who found the program to be beneficial (agreed with item 20) were regarded as the experimental subjects.

Data Analytic Strategies

Confirmatory Factor Analysis (CFA)

To test the theoretical dimensions of the CPYDS, confirmatory factor analysis (CFA) was conducted by using the data collected in Wave 2. Several fit statistics were used, including the chi-square goodness-of-fit test, the goodness-of-fit index (GFI), the comparative fit index (CFI; Bentler, 1990), nonnormed fit index (NNFI; Bentler & Bonett, 1980), the standardized root-mean-square residual (SRMR; Bentler, 1995; Jöreskog & Sörbom, 2006), the root-mean-square error of approximation (RMSEA; Steiger & Lind, 1980), and expected cross-validation index (ECVI; Schumacker & Lomax, 2004; Tanaka, 1993), to evaluate the model fit. For GFI, CFI, and NNFI, there is a general agreement that the values of .95 or greater indicate a satisfactory fit to the data (Schumacker & Lomax). The values of SRMR and RMSEA below .08 and .06, respectively, represent acceptable model-data fit (Hu & Bentler, 1999). The

value of ECVI is used in comparison of models, with smaller values suggesting a better fit of the model to the data. All analyses were conducted using covariance and mean matrices via LISREL 8.80 (Jöreskog & Sörbom). Given all variables were normally distributed (i.e., the univariate skewness and kurtosis values were lower than 2 and 7, respectively) (Chou & Bentler, 1995; Curran, West, & Finch, 1996; Finney & DiStefano, 2006), maximum likelihood estimation (ML) was used.

Individual Growth Curve (IGC)

IGC was conducted to study individual change over time, examine the shape of the growth curves, investigate systematic differences in change, and assess the effects of covariates on group differences in the initial status and the rate of growth. In this study, we tested whether treatment (control group = −1; experimental group = 1) was predictive of students' growth parameters (i.e., initial status, linear slope, quadratic slope, and cubic slope) in several positive youth development indicators across time. In particular, the relationships between these indicators and group were estimated after controlling the effects of gender (−1 = male and 1 = female) and initial age. To simplify the interpretation of the results, the centered initial age was generated by subtracting the mean age (i.e., age 12).

Following the strategy suggested by Singer and Willett (2003), a series of models were tested. These included: (a) an unconditional model was tested to calculate the intraclass correlation coefficient (ICC), (b) an unconditional growth model served as a baseline model to explore whether the growth curves are linear or curvilinear, (c) two higher-order polynomial models were estimated to determine if the rate of change accelerated or decelerated across time, and (d) a conditional model was formed to investigate whether the predictor was related to the growth parameters (i.e., initial status, linear slope, quadratic slope, and cubic slope). The intercept and linear slope were allowed to vary across individuals. Missing data were handled through likewise deletion.

To demonstrate the significant effects of treatment on the rate of change, we plotted prototypical trajectories as suggested by Singer and Willett (2003). For each outcome variable, a linear mixed model (LMM) via SPSS was conducted. As we focused on the entire model (i.e., both fixed and random effects), maximum likelihood (ML) method was used (Hox, 2002). The procedures for analyzing longitudinal data can be seen in Shek and Ma (2011b).

Results

Table 2 shows the descriptive statistics and internal consistencies of the 15 subscales of the CPYDS. The hypothesized 15-factor model did not fit the data well on some of the goodness-of-fit indicators ($\chi^2_{(2,980)} = 22,131.09$, $p < .01$, GFI = .77,

Table 3 Summary of goodness of fit for all CFA models

Model	Description	χ^2	df	CFI	GFI	NNFI	SRMR	RMSEA (90 % CI)	ECVI (90 % CI)
1	15-factor model	22,131.09**	2,980	.97	.77	.97	.10	.06 (.06–.06)	12.02 (11.79–12.25)
1a	Modified model by removing 6 items	15,411.84**	2,527	.98	.82	.98	.05	.06 (.05–.05)	8.36 (8.17–8.55)

Note: CFA confirmatory factor analysis, *CFI* comparative fit index, *GFI* goodness-of-fit index, *NNFI* Bentler-Bonett nonnormed fit index, *RMSEA* root-mean-square error of approximation, *SRMR* standardized root-mean-square residual, *ECVI* expected cross-validation index, *CI* confidence interval
**$p < .01$

SRMR = .10, Table 3). High modification indices (i.e., MI, ranging from 61.87 to 952.84) and low factor loadings (ranging from .03 to .10) were also found in 6 items (4 items from clear and positive identity, 1 item from moral competence, and 1 item from prosocial norms). Therefore, these items were removed in the subsequent model (Model 1a) which improved the overall fit to the data ($\chi^2_{(2,527)} = 15,411.84$, $p < .01$, CFI = .98, GFI = .82, NNFI = .98, RMSEA = .06, SRMR = .05, ECVI = 8.36, Table 3). All factor loadings were statically significant ($t > 1.95$, $p < .05$) and ranged from .35 to .87 (Table 4).

Table 5 presents the IGC findings based on several indicators derived from the CPYDS. Group was a significant predictor of all growth parameters (i.e., initial status, linear slope, quadratic slope, and cubic slope) in all outcome variables, except recognition for positive behavior (cubic slope, $p > .05$), CPYDS-10 (quadratic slop and cubic slope, $p > .05$), and CPYDS-4 (cubic slope, $p > .05$).

Both groups had different initial status at the beginning (recognition for positive behavior: $\beta = .04$, $p < .05$; prosocial involvement: $\beta = .09$, $p < .01$; CPYDS-4: $\beta = .04$, $p < .01$; CPYDS-10: $\beta = .05$, $p < .01$; CPYDS-11: $\beta = .06$, $p < .01$; CPYDS-12: $\beta = .06$, $p < .01$; CPYDS-14: $\beta = .06$, $p < .01$). Control group dropped faster (linear slope: recognition for positive behavior: $\beta = .04$, $p < .01$; prosocial involvement: $\beta = .07$, $p < .01$; CPYDS-4: $\beta = .05$, $p < .05$; CPYDS-10: $\beta = .02$, $p < .05$; CPYDS-11: $\beta = .03$, $p < .01$; CPYDS-12: $\beta = .03$, $p < .01$; CPYDS-14: $\beta = .03$, $p < .01$) and decelerated slower than did the experimental group (quadratic slope: recognition for positive behavior: $\beta = -.02$, $p < .01$; prosocial involvement: $\beta = -.05$, $p < .01$; CPYDS-4: $\beta = -.02$, $p < .05$; CPYDS-11: $\beta = -.02$, $p < .01$; CPYDS-12: $\beta = -.01$, $p < .05$; CPYDS-14: $\beta = -.01$, $p < .01$) across 8 waves. A similar trend was also found in CPYDS-10, except the nonsignificant test results in quadratic slope ($\beta = -.01$, $p > .05$). These results revealed that the two groups differed in their rates of growth over time; these differences occurred up through Wave 7 after which they diminished gradually (see Figs. 1, 2, 3, 4, 5, 6, and 7). These findings demonstrated the beneficial treatment effect on participants' psychological development over time.

Table 4 Completely standardized factor loadings and errors for the models

		FL	E
1. *Bonding*			
A1[a]	I believe my parents (or guardian) would certainly lend me a hand when I needed help	.63	.60
A2	I believe my friends would certainly lend me a hand when I needed help	.67	.55
A3	I believe my teachers would certainly lend me a hand when I needed help	.67	.56
A4	I love my teachers and classmates	.73	.47
A5	I have a lot of caring and good friends	.69	.52
A6	My parents (or guardian) care much for me	.64	.59
2. *Resilience*			
A7	I would not give up easily even in face of difficulties	.69	.52
A8[a]	I could stay optimistic during adverse circumstances	.66	.57
A9	I believe the determined and the willed could accomplish their tasks eventually	.71	.49
A10	I believe those who could persevere in hardships are really magnanimous	.66	.56
A11	Even though the future is not very optimistic, I would still hang on	.71	.50
A12	I believe there are always solutions to problems in life	.69	.52
3. *Social competence*			
A13	I could initiate conversations with strangers	.50	.75
A14[a]	I know how to communicate with people	.74	.45
A15	I am aware of the norms and expectations in interpersonal relationships	.74	.45
A16	I can get along well with other people	.74	.45
A17	I am happy to participate in group life	.68	.54
A18	I have the ability to choose between good and bad friends	.58	.66
A19	I am capable in listening when talking to others	.61	.63
4. *Recognition for positive behavior*			
A20	My teachers would give me compliments when I have tried my best	.77	.40
A21[a]	My classmates would show gratitude when I have helped them	.74	.46
A22	Teachers concern whether I have put in much effort in my work	.66	.56
A23	I find that teachers could reward and punish students appropriately and fairly	.65	.58
5. *Emotional competence*			
B1[a]	I am a cheerful person	.62	.62
B2	I know how to ventilate my emotions appropriately in times of distress	.71	.50
B3	I can usually express my feelings in a rational manner even when I am angry	.69	.53
B4	During conflicts, I can still cope with my emotions	.71	.49
B5	I can put myself in others' shoes to understand their worldviews and feelings	.71	.50
B6	I will let other people understand my emotions	.68	.54
6. *Cognitive competence*			
B7	I believe there are solutions to all problems	.65	.50
B8	I can look at things from different perspectives	.75	.44
B9[a]	I would try to use creative methods to solve my problems	.73	.47
B10	I am capable of analyzing the causes of and finding solutions to problems	.79	.38
B11	I know how to make plans to accomplish my personal goals	.72	.48
B12	I am able to distinguish between what is good and what is bad	.61	.63
7. *Behavioral competence*			
B13	I am able to say no to exorbitant requests	.56	.68
B14[a]	I would take careful consideration before making choices especially when people want to persuade me	.66	.57
B15	I can openly accept criticisms	.69	.53
B16	I can openly express views which are different from others	.71	.50
B17	When I have wronged others, I would apologize	.59	.65

(continued)

Table 4 (continued)

		FL	E
8. *Moral competence*			
C2[a]	I have high moral self-demand toward my own behaviors	.61	.63
C3	I could easily forgive those who have wronged me	.67	.54
C4	I would not do unjust things	.46	.79
C5	I would accomplish what I have promised others to do	.60	.65
C6	Self-evaluation has become my habit	.66	.56
9. *Self-determination*			
C7	I am able to make sensible choices	.59	.65
C8[a]	I have confidence over my own decisions	.70	.51
C9	I would not change my mind easily after I have made a decision	.74	.45
C10	I could concentrate and do well on one task if needed	.69	.53
C11	I feel that I have the freedom to do what I like	.59	.65
10. *Self-efficacy*			
C17[a]	I could determine most of the things that would happen to me in the future	.63	.61
C18	I could accomplish almost everything that I was determined to do	.87	.25
11. *Clear and positive identity*			
D1	I could do as well as other people	.79	.38
D2[a]	I am satisfied with my own academic performance when compared with my classmates	.84	.30
D3	I am satisfied with my own appearance and body	.75	.44
12. *Beliefs in the future*			
D8	I have confidence in solving problems that I might encounter in the future	.67	.55
D9[a]	I am confident that I would be admitted to the university	.71	.49
D10	I believe that when I grow up, I would become someone of use	.78	.39
13. *Prosocial involvement*			
D15	My school and teachers encourage us to participate in voluntary work	.65	.58
D16[a]	I know the ways in joining voluntary services	.64	.60
D17	Altruism between students is encouraged in my school	.81	.35
D18	My classmates valued the practice of sharing	.74	.46
D19	I would try hard to contribute to my school and the society	.80	.35
14. *Prosocial norms*			
E1	I care for the unfortunate in the society	.45	.79
E2[a]	I will participate in voluntary service whenever there is a chance	.76	.43
E3	I agree that we should all be bound by legal rules	.81	.34
E4	I am willing to observe school rules	.83	.30
15. *Spirituality*			
H1	I often feel good and very enjoyed life	.57	.67
H2[a]	To me, life seems to be always exciting	.70	.51
H3	If I could choose, I would still choose to have this life	.64	.59
H4	Regarding the achievement of my life goals, the ideal has been accomplished	.76	.42
H5	My life is colorful and full of excitements	.62	.62
H6	When I try to figure out the relationship between this world and my life, I find that this world and my life are in harmony and provide meaning to my life	.65	.58
H7	Regarding committing suicide, I have never considered it before	.51	.74

All parameters were significant ($p < .05$); *FL* completely standardized factor loading, *E* errors
[a]Item was fixed to a value of 1.0

Table 5 Results of growth curve models for indicators derived from the CPYDS

	PB	PI	CPYDS-4	CPYDS-10	CPYDS-11	CPYDS-12	CPYDS-14
Intercept							
Initial status	4.56**	4.55**	4.85**	4.54**	4.54**	4.55**	4.66**
Group	.04*	.09**	.04**	.05**	.06**	.06**	.06**
Gender	.11**	.10**	.14**	.06**	.08**	.07**	.08**
Age	−.01	−.05**	−.03	−.03**	−.03**	−.03**	−.04**
Linear slope							
Initial status	−.24**	−.31**	−.28**	−.12**	−.16**	−.15**	−.18**
Group	.04**	.07**	.05*	.02*	.03**	.03**	.03**
Gender	−.11**	−.09**	−.09**	−.08**	−.08**	−.08**	−.09**
Age	.04*	.06**	.04	.03*	.03**	.03**	.03**
Quadratic slope							
Initial status	.10**	.15**	.11**	.06**	.07**	.07**	.08**
Group	−.02**	−.05**	−.02*	−.01	−.02**	−.01*	−.01**
Gender	.04**	.04**	.04**	.03**	.04**	.03**	.04**
Age	−.01	−.03*	−.01	−.01	−.01*	−.01*	−.01*
Cubic slope							
Initial status	−.01**	−.02**	−.01**	−.01**	−.01**	−.01**	−.01**
Group	.00	.01**	.00	.00	−.00*	−.00**	.00*
Gender	−.00**	−.01**	−.00**	−.00**	−.00*	−.00*	−.00*
Age	.00	.00*	.00*	.00	.00*	.00	.00

Note: *PB* recognition for positive behavior, *PI* prosocial involvement, *CPYDS-4* an indicator based on 9-items of the CPDYS; *CPYDS-10* 10 subscales of the CPYDS, *CPYDS-12* 12 subscales of the CPYDS, *CPYDS-14* 14 subscales of the CPYDS
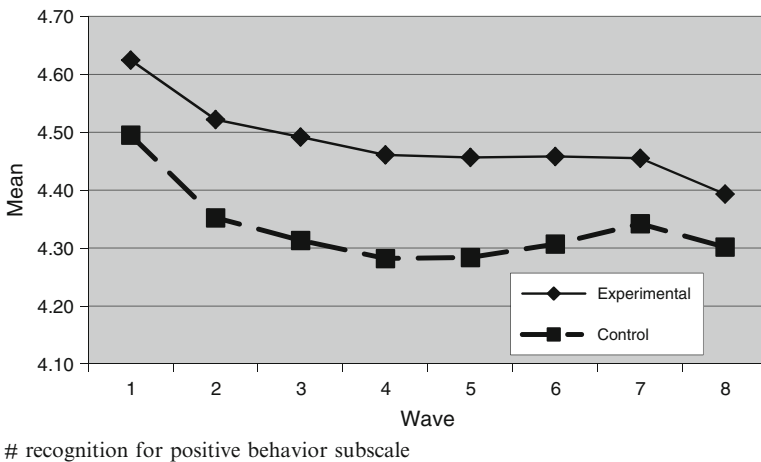*p<.05; **p<.01

\# recognition for positive behavior subscale

Fig. 1 Growth trajectories of the experimental participants and control participants using PB[#] as an outcome indicator

#prosocial involvement subscale based on 4 items

Fig. 2 Growth trajectories of the experimental participants and control participants using PI# as an outcome indicator

#CPYDS-4: an indicator based on 9 items of the CPYDS

Fig. 3 Growth trajectories of the experimental participants and control participants using CPYDS-4# as an outcome indicator

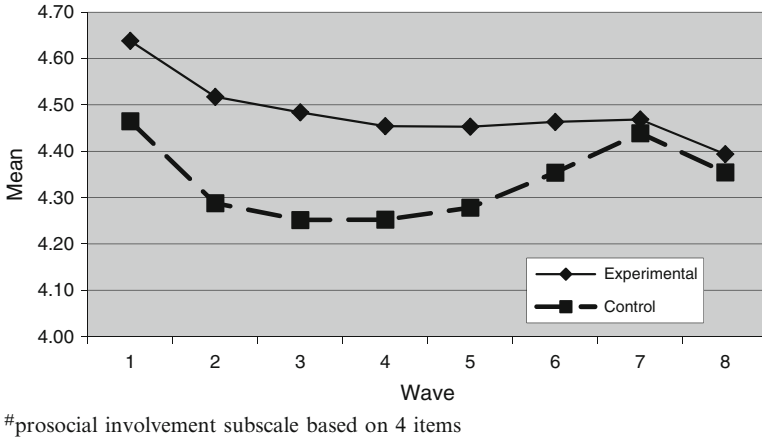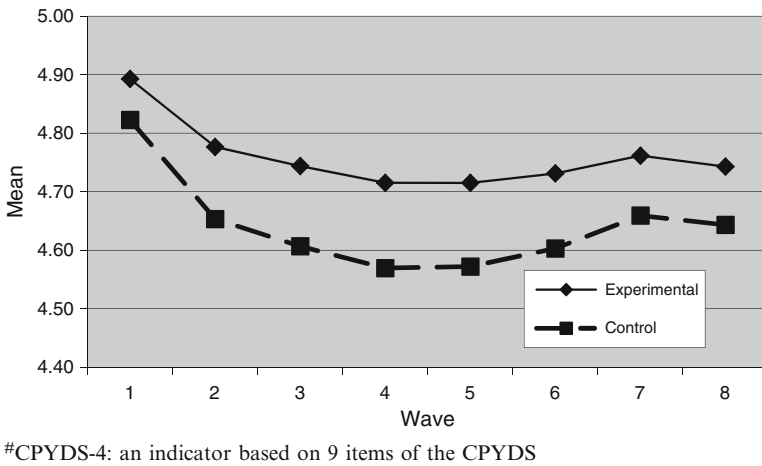## Discussion

One purpose of the study is to test the factorial validity of the Chinese Positive Youth Development Scales (CPYDS). Findings from the confirmatory factor analysis generally suggest that the CPYDS is a psychometrically sound instrument measuring 15 positive youth development constructs (i.e., bonding, resilience, social competence, recognition for positive behavior, emotional competence, cognitive

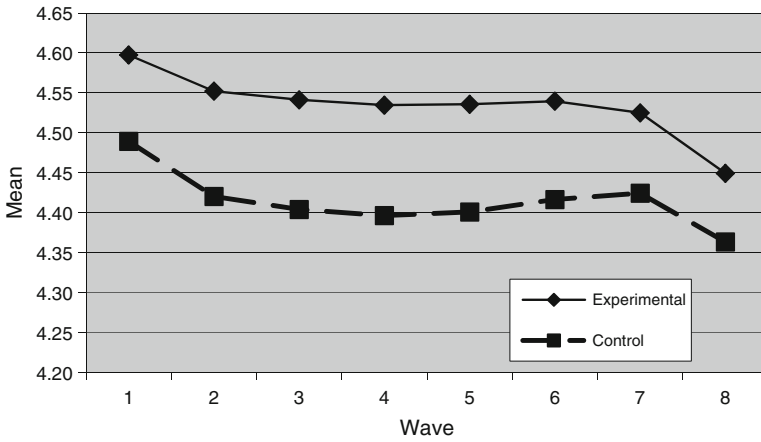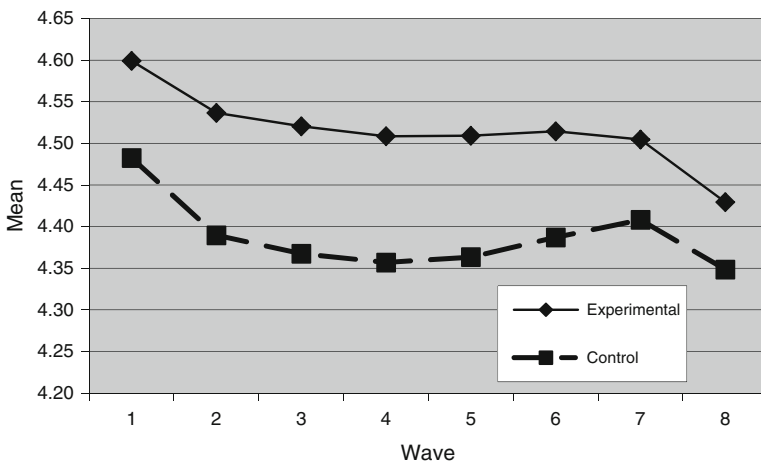#CPYDS-10: 10 subscales excluding bonding, prosocial norms, prosocial involvement, self-efficacy, and spirituality

Fig. 4 Growth trajectories of the experimental participants and control participants using CPYDS-10# as an outcome indicator

#CPYDS-11:11 subscales excluding behavioral competence, self-determination, prosocial norms, and spirituality

Fig. 5 Growth trajectories of the experimental participants and control participants using CPYDS-11# as an outcome indicator

competence, behavioral competence, moral competence, self-determination, self-efficacy, clear and positive identity, beliefs in the future, prosocial involvement, prosocial norms, and spirituality), although there are six problematic items (i.e., four items from clear and positive identity, one item from moral competence, and one item from prosocial norms). These results presented empirical evidence for the validity of the CPYDS which echoes the need to establish valid and reliable positive

#CPYDS-12:12 subscales excluding bonding, prosocial norms, and spirituality
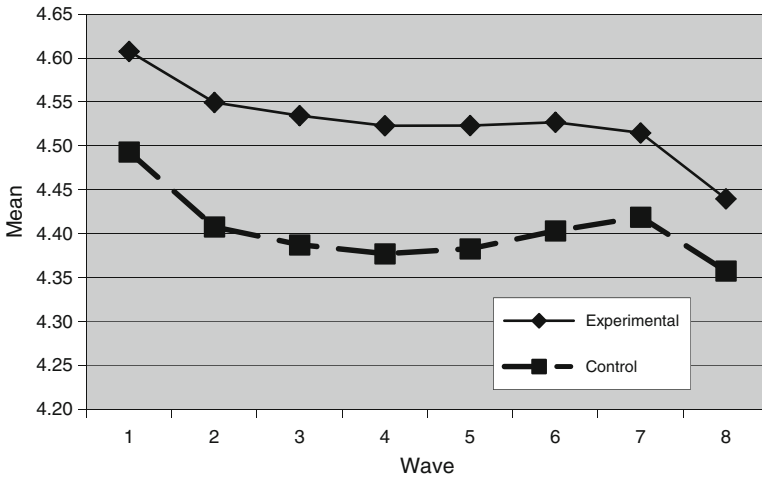
Fig. 6 Growth trajectories of the experimental participants and control participants using CPYDS-12# as an outcome indicator
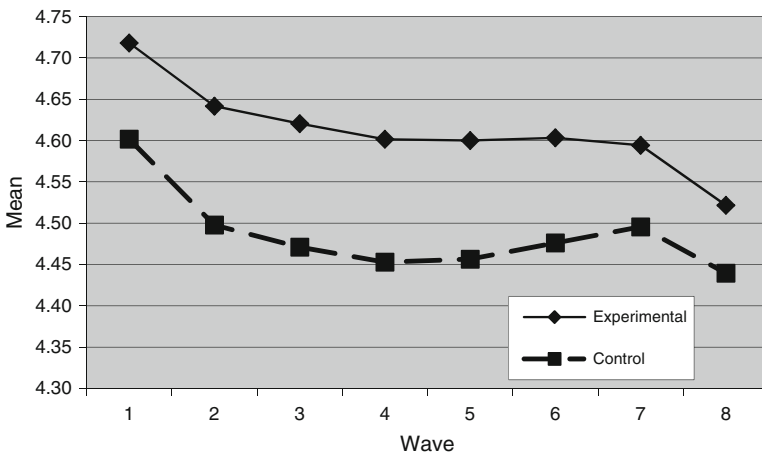

#CPYDS-14:14 subscales excluding self-efficacy subscale

Fig. 7 Growth trajectories of the experimental participants and control participants using CPYDS-14# as an outcome indicator

youth development measure for bridging the gap between research and practice (Roth & Brooks-Gunn, 2003). As pointed out by Catalano, Berglund, Ryan, Lonczak, and Hawkins (1999), "a major obstacle to tracking indicators of positive youth development constructs is the absence of widely accepted measures for this purpose. Although such outcomes as academic achievement, engagement in the workforce, and financial self-sufficiency are commonly used, many aspects of

positive youth development go unassessed due to the underdeveloped state of the assessment tools" (pp. vi–vii). Clearly, this study is considered a positive response to this call.

Participants who joined and found the program to be beneficial to their development generally performed better than those from the control group in terms of different positive youth development indicators (i.e., recognition for positive behavior, prosocial involvement, CPYDS-4, CPYDS-10, CPYDS-11, CPYDS-12, CPYDS-14). These results are consistent with previous longitudinal findings (Shek & Ma, 2012; Shek & Yu, 2012) and demonstrate the significant treatment effects on influencing the growth trajectory of the psychological development among Hong Kong Chinese adolescents. It is important to note that such effects were sustained after the completion of the program for 2 years.

There are several limitations of the present findings. First, the results are based on self-report measure; future studies should use multiple approaches to obtain a more comprehensive picture regarding the impact of such programs on the development of adolescents. Second, the conclusion was drawn based on Hong Kong Chinese adolescents; more research should be conducted to replicate the findings across different populations and in different non-Western contexts. Lastly, future research should investigate the longitudinal invariance of the CPYDS to provide further support of the validity of this tool.

Despite the above limitations, the present findings can be regarded as pioneering and groundbreaking in the Chinese context. This is the first known scientific study that adopted a randomized group trial design using longitudinal data to evaluate a positive youth development program in a Chinese population. Given the paucity of instruments in assessing psychosocial functioning of Chinese adolescents (Shek, 2002), our study sheds light on developing and designing youth development program for Chinese adolescents.

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Impact of the Project P.A.T.H.S. on Adolescent Risk Behavior: A Five-Year Longitudinal Study

Daniel T.L. Shek and Lu Yu

Introduction

Adolescent risk behaviors refer to behaviors that have negative effects on adolescent development and well-being or those that potentially limit young people in future success and development (Jessor, 1998). While some risk behaviors can cause immediate damage to oneself or other people, such as violent behavior, damaging others' properties, and trespasses, others have cumulative adverse effects, such as substance use, Internet addiction, and unprotected sexual behaviors. Obviously, an adolescent's normal and healthy development can be seriously disrupted by these behaviors. For the past decades, the concern for adolescent risk behaviors has been growing across the world. Researchers, parents, helping professionals, and policy makers have repeatedly advocated the urgent need for developing effective evidence-based programs, strategies, and policies to prevent different youth risk behaviors (Pittman, Irby, Tolman, Yohalem, & Ferber, 2003; Shek & Yu, 2011a).

In the context of Hong Kong, Shek, Ma, and Sun (2011) reviewed several popular adolescent developmental problems, including substance use, Internet addiction, sexual behaviors, school bullying, and adolescent materialistic orientations, and pointed out that the issue of youth problems in Hong Kong deserves more attention from the whole society. In this review, Shek et al. (2011) further argued for the importance of understanding the mechanisms underlying the development of

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different youth risk behaviors and the importance of developing evidence-based youth programs. Specifically, the ecological perspective was emphasized, which has typically been used to guide intervention strategies. In ecological models, one basic view is that different risk and protective factors at various ecological levels contribute to adolescent risk behaviors. Numerous research studies have shown that risk factors at the individual level (e.g., weak psychosocial competencies, meaning-lessness), family level (e.g., parental marital discords, non-intact families), school level (e.g., low academic achievement, weak school support), and community level (e.g., growing up in deprived communities, easy accessibility to drugs) increase the likelihood of adolescent risk behavior, such as drug abuse in adolescents (Shek, 2007). On the other hand, protective factors that can reduce the probability of adolescent risk behavior have also been identified, such as healthy attribution style, self-efficacy, hope, optimism, and faith at the individual level; supportive home environment and parental guidance at the family level; and supportive nonparent adults, good schools, and other community assets at the community level (Bogenschneider, 1996; Resnick, 2000).

Based on an ecological understanding of adolescent development, a positive youth development approach has been commonly adopted in recent years by researchers to prevent different youth risk behaviors. The underlying assumption of positive youth development programs is that through strengthening psychosocial competencies in adolescents and reducing the impact of risk factors, adolescent risk behavior will not easily develop. According to Catalano, Berglund, Ryan, Lonczak, and Hawkins (2002), the positive youth development approach has several attri-butes: (1) a focus on holistic youth development rather than dealing with a single youth problem, (2) a belief that "problem-free is not fully prepared," (3) an emphasis of person-in-environment perspective, and (4) a focus on developmental models on how young people grow, learn, and change. In the past decades, a large amount of research findings have demonstrated the effectiveness of this positive youth development approach in preventing various adolescent risk behaviors.

While most positive youth development programs are developed and imple-mented in the West, the Project P.A.T.H.S. is probably the largest adolescent program in Asian countries funded by the Hong Kong Jockey Club Charities Trust. The word "P.A.T.H.S." stands for *P*ositive *A*dolescent *T*raining through *H*olistic *S*ocial Programs. In 2005, researchers from five universities in Hong Kong designed the project with the aim to promote positive development among Hong Kong secondary school students (Secondary 1–3) and to reduce their risk behaviors (Shek, 2006; Shek, Ma, & Merrick, 2002). The project consists of two tiers. The Tier 1 Program is a universal curriculum-based program developed upon 15 positive youth development constructs proposed by Catalano and col-leagues (2002), including bonding, resilience, social competence, recognition of positive behavior, emotional competence, cognitive competence, behavioral com-petence, moral competence, self-determination, self-efficacy, clear and positive identity, beliefs in the future, prosocial involvement, prosocial norms, and spiri-tuality. The Tier 2 Program adopts a selective approach targeting at about one fifth of students who have greater psychosocial needs. The project has been implemented

in roughly half of the total number of secondary schools in Hong Kong for consecutively 7 years in the initial phase and extension phase.

To determine whether and the extent to which the Project P.A.T.H.S. can effectively achieve its intended outcomes, various evaluative methods have been used (Shek & Sun, 2009, 2012). In particular, a longitudinal randomized controlled trial was utilized to trace the developmental trajectory based on different risk behavior and positive developmental outcome indicators in students who participated in the project (i.e., experimental group subjects) and a group of control students. According to Sibbald and Roland (1998), randomized controlled trial is the most stringent way of determining whether a cause-effect relation exists between the intervention and the outcome. The trial for evaluating the Project P.A.T.H.S. started in 2006 when the program was first implemented at its full scale, with 19 experimental schools and 24 control schools participating in the study. For the first two waves of data, results showed that participants in the experimental group exhibited greater improvements in different positive youth development constructs at posttest than did the control group students (Shek, 2009, 2010). Based on the first four waves of data in the trial, Shek and Sun (2010) reported that students who participated in the program had significantly better positive outcomes in terms of psychosocial competencies, academic and school behavior, and global positive youth development as well as exhibited lower levels of delinquent behaviors as compared to students in the control group. When the 3-year project had been completed with six waves of data collected, Hierarchical Linear Modeling (HLM) was used to examine the program impacts on participants over time, which enables researchers to estimate individual growth curves of each behavioral indicator in a more precise way, as compared to the traditional analyses of covariance. Similar findings that support the positive effects of the project were reported (Shek & Ma, 2011a; Shek & Yu, 2011b).

To further examine the long-term effect of the program, an extra two waves of data were collected after completion of the project when participants entered into Secondary 4 and Secondary 5 (i.e., Grade 10 and Grade 11). Using linear mixed models via SPSS, significant effects of the project on promotion of positive youth development and reduction of risk behaviors based on the eight waves of data have been reported. Participants in the experimental schools not only displayed better positive youth development outcomes but also showed slower increases in delinquent behaviors than did the control participants over 5 years (Shek & Ma, 2012; Shek & Yu, 2012).

At each posttest data collection, participants were invited to respond to a subjective outcome scale as well. With such subjective outcome evaluation data, it would be interesting and theoretically important to ask whether program participants who found the program to be effective would perform better than the control participants. By looking at this effect, the impact of the intervention on the objective outcome indicators would be sharpened. The present study aims to add the effect of subjective outcome evaluation in understanding the intervention effect. Specifically, we are interested in understanding whether participants reporting positive subjective outcomes would be different from control participants after attending the program in terms of different risk behaviors. In fact, it was expected that the program effect

should be more pronounced for this group of program participants. To answer this question, the longitudinal effects of the Project P.A.T.H.S. on participants who considered the program effective were examined based on the eight waves of data collected from the randomized controlled trial. Similar to previous studies, linear mixed-effect modeling using SPSS was employed for data analyses.

Method

Participants and Procedures

With the help of the Education Bureau of the Hong Kong Government, 24 pairs of schools stratified by district with equivalent school characteristics, including banding, religious background, and gender of students, were randomly selected from all participating schools adopting the full curriculum mode of the program in the beginning of the project. The 24 pairs of schools were randomly assigned to either the experimental group (24 schools) in which students would participate in the program or the control group (24 schools) where the project would not be implemented (Shek, Siu, Lee, Cheung, & Chung, 2008).

After the first-year implementation of the program, one experimental school dropped out. Thus, Wave 2 data were collected from Secondary 1 students in 23 experimental schools and 24 control schools. In the second year, Wave 3 and Wave 4 data were collected from the same cohort who was promoted to Secondary 2, with 20 experimental schools (i.e., three schools withdrew after Wave 2) and 24 control schools. In Year 3, one experimental school dropped out after Wave 4, and Wave 5 and Wave 6 data were collected from the same cohort in Secondary 3 at that time, including 19 experimental schools and 24 control schools. In Year 4 (i.e., 1 year after the completion of the Project P.A.T.H.S.), Wave 7 data were collected from the same cohort who was promoted to Secondary 4, including 19 experimental schools and 24 control schools. In Year 5, Wave 8 data were collected from the same cohort of students who were in Secondary 5, with 19 experimental schools and 24 control schools attending the study 2 years after the completion of the program. Table 1 shows the number of completed questionnaires collected in each wave. For the present study, participants in the experimental group who perceived the Project P.A.T.H.S. as beneficial to their development at Wave 2 (i.e., posttest at Secondary 1) were identified based on the results of the subjective outcome evaluation form compared with the control group students.

At each measurement occasion, the purposes of the study were introduced and confidentiality of the data collected was repeatedly ensured to all participants in attendance on the days of survey. Parental and student consent forms had been obtained before data collection. Participants responded to the questionnaires in a self-administration format in classroom settings. Adequate time was provided for the participants to complete the questionnaire. A trained research assistant was present throughout the administration process.

Table 1 Number of collected questionnaires across waves

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	Wave 8
No. of schools	48	47[a]	44[b]	44[c]	43	43	43	43
Control group	3,797	3,654	3,765	3,698	3,757	3,727	3,669	3,640
Male	1,936	1,876	1,896	1,888	1,874	1,894	1,894	1,865
Female	1,613	1,619	1,666	1,599	1,682	1,679	1,689	1,716
Experimental group	4,049	3,734	3,174	2,999	3,119	3,006	2,879	2,852
Male	2,154	1,998	1,691	1,548	1,632	1,591	1,536	1,533
Female	1,745	1,571	1,283	1,259	1,312	1,278	1,225	1,272
Total no. of participants	7,846	7,388	6,939	6,697	6,876	6,733	6,548	6,492
% of successfully matched	98 %	96 %	97 %	98 %	99 %	97 %	93 %	91 %

[a]1 Experimental school ($n = 207$) had withdrawn after Wave 1
[b]3 Experimental schools ($n = 629$) had withdrawn after Wave 2
[c]1 Experimental school ($n = 71$) had withdrawn after Wave 4

Instruments

Participants were invited to respond to a composite questionnaire that consists of different measures of youth development constructs and problem behaviors.

Chinese Positive Youth Development Scale (CPYDS)

The CPYDS consists of 15 subscales which are listed as follows:

1. Bonding Subscale (six items)
2. Resilience Subscale (six items)
3. Social Competence Subscale (seven items)
4. Emotional Competence Subscale (six items)
5. Cognitive Competence Subscale (six items)
6. Behavioral Competence Subscale (modified five items)
7. Moral Competence Subscale (six items)
8. Self-Determination Subscale (five items)
9. Self-Efficacy Subscale (modified two items)
10. Beliefs in the Future Subscale (modified three items)
11. Clear and Positive Identity Subscale (seven items)
12. Spirituality Subscale (seven items)
13. Prosocial Involvement Subscale (five items)
14. Prosocial Norms Subscale (five items)
15. Recognition for Positive Behavior Subscale (four items)

Despite the inclusion of CPYDS in the composite questionnaire, the longitudinal findings based on this scale and its subscales were reported elsewhere

(Shek & Ma, 2012). The present study only focuses on the developmental trend of problem behaviors among students in the experimental schools and the controlled schools, including different delinquent behaviors, substance abuse, and intentions of engaging in problem behaviors in the future.

Delinquency Scale

This scale comprises 12 items that assess the frequency of delinquent behavior of participants in the past year, including stealing, cheating, truancy, running away from home, damaging others' properties, assault, having sexual relationship with others, gang fighting, speaking foul language, staying away from home without parental consent, strong-arming others, and breaking into others' places (Shek, 2005). Respondents rated the frequency of these behaviors in the past half a year on a six-point Likert scale (0 = never, 1 = 1–2 times, 2 = 3–4 times, 3 = 5–6 times, 4 = 7–8 times, 5 = 9–10 times, 6 = more than 10 times). Both the scale score and each item score were used in the analyses. The Cronbach's alpha of the delinquency scale at each wave is shown in Table 2.

Substance Use Scale

Eight items were used to assess participants' frequency of using different types of substance in the past half a year, including alcohol, tobacco, ketamine, cannabis, cough mixture, organic solvent, ecstasy, and heroin. Participants rated their occurrence of these behaviors on a six-point Likert scale (0 = never, 1 = 1–2 times, 2 = 3–5 times, 3 = more than 5 times, 4 = several times a month, 5 = several times a week, 6 = every day). In this study, in addition to the scale score of substance use (i.e., mean score of the eight items) and each item score, several composite scores were created for analyses including CAS (tobacco and alcohol use), IPS (use of illegal drugs: ketamine, cannabis, ecstasy, and heroin), and LPS (use of legal drugs: cough mixture, organic solvent). Scores of CAS, IPS, and LPS were calculated by averaging the relevant item scores. The internal consistency of this scale is reported in Table 2.

Problem Behavior Intention Scale

Five items were used to assess participants' behavioral intention to engage in problem behaviors, including drinking alcohol, smoking, taking drugs (such as ketamine, cannabis, or ecstasy), having sex with others, and gambling (Lam, Shek, Ng, Yeung, & Lam, 2005). Respondents were asked to rate the likelihood that they

Table 2 Internal consistency and mean inter-item correlations for composite problem behavior indicators

	Wave 1		Wave 2		Wave 3		Wave 4		Wave 5		Wave 6		Wave 7		Wave 8	
	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]	α	Mean[a]
DELINQ	0.77	0.32	0.79	0.35	0.79	0.35	0.82	0.40	0.81	0.38	0.82	0.38	0.80	0.39	0.76	0.34
DRUG	0.76	0.56	0.81	0.58	0.77	0.56	0.82	0.61	0.79	0.59	0.83	0.63	0.78	0.60	0.72	0.58
BEINT	0.76	0.47	0.78	0.47	0.79	0.49	0.78	0.46	0.79	0.47	0.79	0.46	0.76	0.41	0.73	0.37

Note: DELINQ delinquency, *DRUG* substance abuse, *BEINT* problem behavior intention

All parameters were significant (*p* < .05)

[a]Mean inter-item correlation

may engage in these problem behaviors in the next 2 years on a four-point Likert scale, with "1" representing "never," "2" for "not likely," "3" for "likely," and "4" for "definitely." The program behavior intention scale score was used in the analyses and the internal consistency for the scale at each wave is listed in Table 2.

Subjective Outcome Scale (SOS)

Twenty items were used to assess participants' satisfaction with the program and instructor as well as their perceived benefits of the program at posttests (i.e., Waves 2, 4, and 6). The response options included "strongly disagree," "moderately disagree," "slightly disagree," "slightly agree," "moderately agree," and "strongly agree." Item 20 (SOS-20) of this scale was "overall speaking, the program was beneficial to my development." Based on this item, further analyses were carried out by selecting those experimental participants who found the program to be beneficial at Wave 2.

Data Analytic Plan

The Individual Growth Curve modeling (IGC) approach (Shek & Ma, 2011b) was adopted in the present study to analyze adolescents' individual change in problem behaviors over time and to examine the longitudinal effects of the Project P.A.T.H.S. on the developmental trajectories of different youth problem behaviors. Both composite indicators (i.e., scale scores of delinquency, substance abuse, and problem behavior intention) and individual item scores were treated as dependent variables in separate IGC models.

The use of IGC in studying longitudinal data has been documented in the scientific literature (Sheryl, Chen, Kumar, & Holmes, 2010). Basically, longitudinal data are considered as a two-level hierarchical model in which time is nested within individuals (Bryk & Raudenbush, 1992; Miyazaki & Raudenbush, 2000). The Level 1 model refers to the intraindividual change model that models the variation within an individual over time and estimates the average within-person initial status and the average rate of change over time. In other words, the outcome variable is represented as simply the function of time without any other predictors involved. The Level 2 model examines whether the rate of change varies across individuals in a systematic way. The growth parameters estimated in the Level 1 model serve as the outcome variables in the Level 2 model which are further predicted by various interindividual variables. At this step, different explanatory variables, such as "intervention," can be included to analyze their effects on the interindividual variation of outcome variables. In the present study, the longitudinal effects of the program on youth problem behavior were tested by examining whether participating in the Project P.A.T.H.S. and considering the program to be effective were predictive of

students' growth parameters in terms of initial status, linear change, quadratic change, and cubic change in different problem behavior indicators across time, with the effects of gender and initial age being controlled. In the IGC model, the intercept (i.e., initial status) and linear slope were allowed to vary across individuals.

Specifically, a dummy/dichotomous variable was first created (i.e., *group*—experimental group with positive evaluation of the program vs. control group) as a major predictor. Since the present study focused on participants who perceived the program as beneficial, students who attended the Project P.A.T.H.S. and showed positive responses to the effectiveness of the program were coded as 1 and participants in the control group were coded as −1. Two covariates (i.e., gender and initial age) were included when examining the predictive effects of "group" on the outcome variables. *Gender* was coded as −1 = male and 1 = female. Following Shek and Ma's (2011b) method, continuous variables were grand-mean centered in order to simplify the interpretation of the results (Shek & Ma, 2010). In this study, the mean age was 12. Initial age was then centered by subtracting the mean age, and therefore, the centered initial age was generated.

To facilitate the interpretation of the significant interaction effects (between time and the program variables), the prototypical trajectories were plotted as suggested by Singer and Willett (2003) to illustrate the effect of treatment on the rate of change across time. The steps in creating prototypical plots are generally identical to the method of plotting graphs in regression (Jandasek, Holmes, DeLucia, Zebraki, & Friedman, 2009). For each outcome variable, a linear mixed model (LMM) via SPSS with maximum likelihood estimation was conducted. As the focus was on the entire model (both fixed and random effects), maximum likelihood method was used (Hox, 2002). The procedures for analyzing longitudinal data via SPSS can be seen in Shek and Ma's (2011b) paper.

Results

Preliminary analyses showed that there were no significant differences between the 19 experimental schools and 24 control schools in banding (i.e., categorization based on students' academic competence), geographic district, religious affiliation, sex ratio of the students, and source of funding. At the individual level, students from the two groups did not differ significantly in all of the sociodemographic background characteristics ($p > 0.05$), except for age. The mean age of the control group was higher than that of the experimental group. In other words, the background characteristics of the experimental schools and control schools were highly comparable at Wave 1.

Table 3 presents the IGC findings based on different problem behavior indicators. Results showed that there were significant interactions of groups and slopes for delinquency (scale score) and problem behavior intention (scale score). Using individual item/composite problem behavior scores as dependent variables, significant interactions of groups and slopes were found in the item scores of damaging others'

Table 3 Growth curve models for problem behavior indicators with subjects joining the Tier 1 Program and perceiving the program as effective being experimental subjects

	DELINQ	DRUG	BEINT	IPS	LPS	Tobacco	Alcohol	CAS	Solvent	Ecstasy	Heroin	Damage	Violence	Night	Trespasses
Dependent variables															
Intercept															
Initial status	.22**	.07**	1.20	.00	.02**	.09**	.39**	.24**	.03**	.00	.00	.11**	.05**	.05**	.04**
Group	-.03**	-.01	-.01*	.00	.00	-.02*	-.03*	-.03**	.00	.00	.00	-.01	-.01	-.01	-.01
Gender	-.05**	-.01**	-.05	.00	.00	-.03**	-.08**	-.05**	-.01	.00	.00	-.05**	-.03**	-.03**	-.01
Age	.06**	.04**	.06	.01**	.01**	.15**	.12**	.13**	.01*	.01**	.01	.05**	.03**	.09**	.02**
Linear															
Initial status	.25**	.07**	.22**	.01**	.01**	.22**	.40**	.31**	.02**	.02**	.01**	.12**	.05**	.08**	.02**
Group	-.02*	.00	.02	-.01*	-.01**	.04*	.04*	.04**	-.01**	-.01*	-.01**	-.04*	-.01*	-.02*	-.01**
Gender	-.01	.00	.02*	-.01**	-.01*	.04*	.09**	.06*	-.01*	-.01*	-.01**	-.02	-.03**	-.02**	-.01*
Age	-.03	-.01*	.00	.00	-.01*	.04*	.00	.02	-.01*	.00	.00	-.02	-.02**	-.01	-.01*
Quadratic															
Initial status	-.08**	-.01	-.06**	-.002**	-.003**	-.05**	-.10**	-.08**	-.004**	-.003**	-.002**	-.04**	-.01**	-.01	-.004**
Group	.01*	.00	-.02**	.001**	.001**	-.02*	-.02*	-.02**	.002**	.002*	.001**	.02**	.00	.003*	.003**
Gender	.00	.00	-.02**	.001**	.00	-.02**	-.04**	-.03**	.00	.001*	.001*	-.01	.01*	.00	.00
Age	.00	.00	.00	.00	.00	-.02*	.00	-.02*	.00	.00	.00	.00	.003*	.00	.003*
Cubic															
Initial status	.01**	–	.01**	–	–	.01**	.01**	.01**	–	–	–	.003*	–	–	–
Group	.00	–	.002**	–	–	.003*	.003*	.003**	–	–	–	-.003**	–	–	–
Gender	.00	–	.002*	–	–	.003*	.005**	.004**	–	–	–	.00	–	–	–
Age	.00	–	.00	–	–	.004**	.00	.003*	–	–	–	.00	–	–	–

Note: DELINQ scale score of the delinquency scale, *DRUG* scale score of the substance abuse scale, *BEINT* scale score of the intention of problem behavior scale, *IPS* composite score of using illegal drugs (ketamine, cannabis, ecstasy, and heroin), *LPS* composite score of using legal drugs (organic solvent and cough medicine), *CAS* composite score of using tobacco and alcohol, *Damage* item score of damaging other's property, *Violence* item score of violent behavior, *Night* item score of staying outside home overnight without parental approval, *Trespasses* item score of trespasses
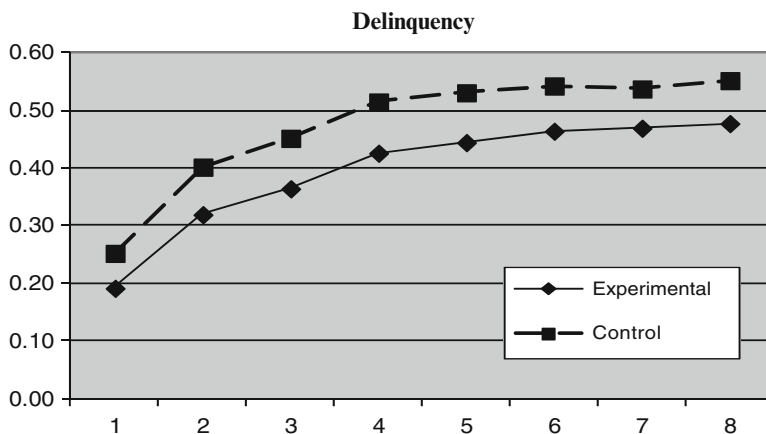
$*p<.05; **p<.01$

Fig. 1 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the scale score of delinquency as the outcome indicator

properties, violence, staying outside home overnight, trespasses, use of tobacco, alcohol, solvent, ecstasy, heroin, and the composite scores of tobacco and alcohol use, illegal drug use, and legal drug use.

Delinquency

For both the experimental group and the control group, delinquent behaviors increased over time, following a cubic developmental trend. Group difference was a significant predictor for the initial status and linear and quadratic slopes but was unrelated to the cubic slope. Group difference in the initial status ($\beta=-.03$, SE$=.01$, $p<.01$), linear slope ($\beta=-.02$, SE$=.01$, $p<.05$), and quadratic slope ($\beta=.01$, SE$=.01$, $p<.05$) indicated that the experimental group scored lower at the beginning of the study and had a slower rate of increase and a faster deceleration rate than the control group. As seen in Fig. 1, across the eight waves of data collection, the experimental group consistently exhibited lower levels of delinquent behaviors compared to the control group.

Using individual delinquent behavior as the dependent variable, significant group effects over time were detected in damage (i.e., damaging other's properties), violence, night (staying outside home overnight), and trespasses. First, for damage, which follows a cubic developmental trend, the interactions between groups and all time slopes were significant. The group differences in linear slope ($\beta=-.04$, SE$=.01$, $p<.05$), quadratic slope ($\beta=.02$, SE$=.002$, $p<.01$), and cubic slope ($\beta=-.003$, SE$=.001$, $p<.01$) indicated that while damage behaviors increased in both the experimental group and the control group, the experimental group had a slower rate of increase, a faster rate of deceleration, and a slower speed
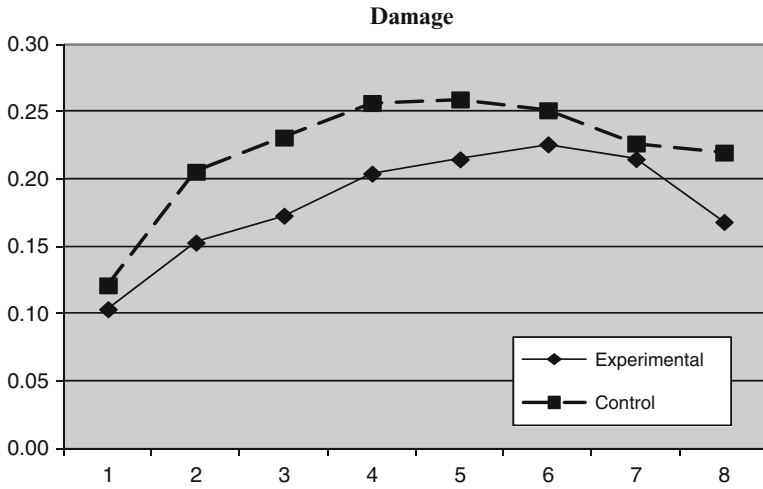
Fig. 2 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the item score of damaging other's properties (Damage) as the outcome indicator
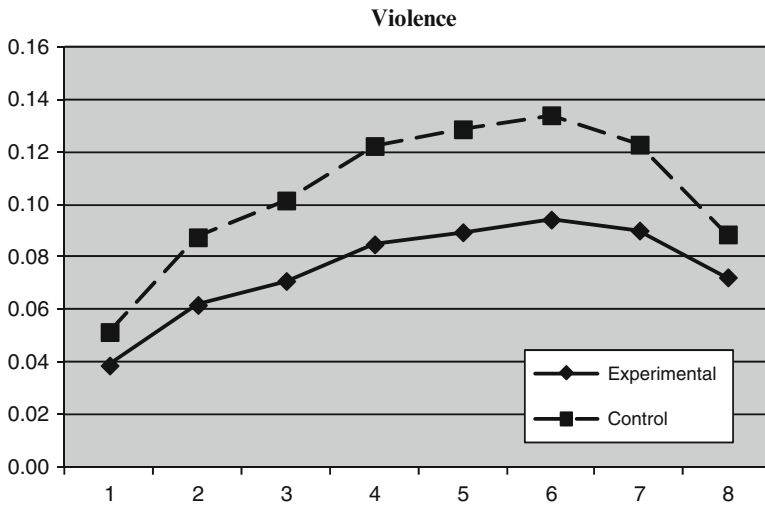

Fig. 3 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the item score of violence as the outcome indicator

of cubic change than did the control group (Fig. 2). Second, violence, night, and trespasses all followed a quadratic developmental model, in which group effects were significant for both linear and quadratic slopes. As seen in Figs. 3, 4, and 5, the experimental group increased slower than did the control group in the three
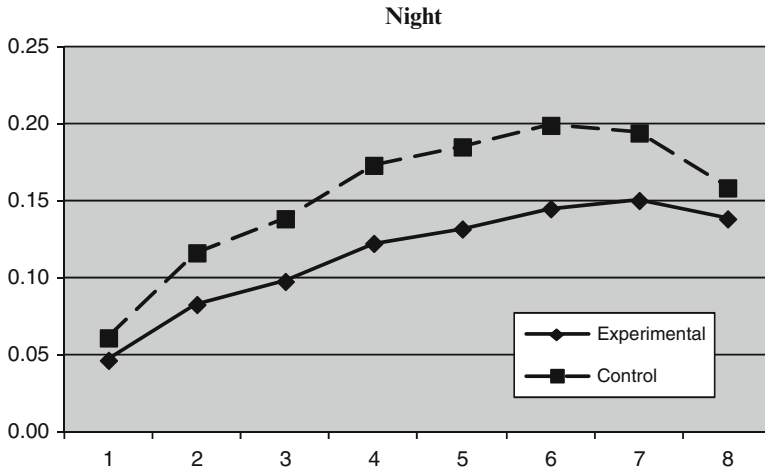
Night

Fig. 4 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the item score of staying outside home overnight without parental approval (Night) as the outcome indicator

Trespasses

Fig. 5 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the item score of trespasses as the outcome indicator

forms of delinquent behaviors. However, after Wave 6 (i.e., when the program was completed and the students entered into senior secondary school), the control group showed a faster deceleration in delinquent behaviors as compared to the experimental group.
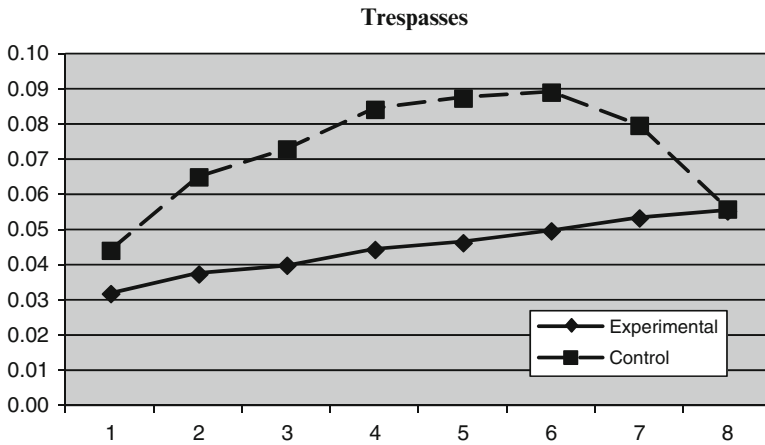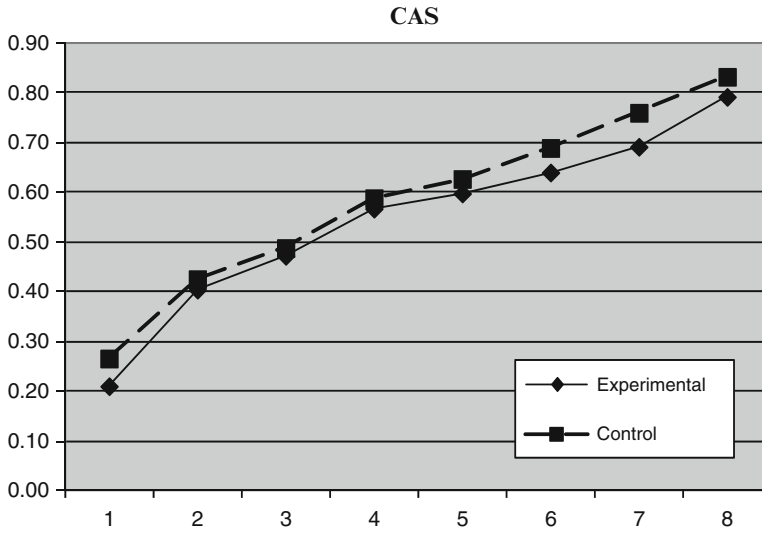
CAS

Fig. 6 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the composite score of tobacco use and alcohol use (CAS mean of tobacco and alcohol use) as the outcome indicator

Substance Use

As seen in Table 3, participants' use of different substance generally increased with time. Although for the scale score of substance abuse, no significant effects of group were found, and several composite scores and item scores showed significant interaction effects between group and time slopes. As mentioned earlier, because adolescents' use of different types of substances may have different developmental trajectories, three composite scores were created and included in the analyses, including CAS (tobacco and alcohol use), IPS (illegal drug use), and LPS (legal drug use). For CAS, group effects were significant on the linear slope ($\beta = .04$, SE $= .01$, $p < .01$), quadratic slope ($\beta = -.02$, SE $= .004$, $p < .01$), and cubic slope ($\beta = .003$, SE $= .001$, $p < .01$). This indicates that while the initial rates of increase in CAS were more rapid in the experimental group than in the control group, the experimental group showed a faster deceleration and cubic development in the rate of increase than did the control group. Figure 6 depicts the developmental curve of this indicator. Similar developmental patterns can be observed in alcohol use and tobacco use individually as shown in Figs. 7 and 8.

For IPS and LPS, their developmental trajectories in the present sample followed a quadratic pattern. It was found that the experimental group and the control group significantly differed on the linear slopes ($\beta = -.01$, SE $= .004$, $p < .05$ for IPS; $\beta = -.01$, SE $= .004$, $p < .01$ for LPS) and quadratic slopes ($\beta = .001$, SE $= .001$, $p < .05$

Fig. 7 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the item score of alcohol use as the outcome indicator

Fig. 8 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the item score of tobacco use as the outcome indicator

for IPS; $\beta = .001$, SE $= .001$, $p < .01$ for LPS). As seen in Figs. 9 and 10, for both IPS and LPS, the control group first showed a significantly faster increase in drug use and then had a faster deceleration than did the experimental group, especially after Wave 6. Similar results were found in individual drug uses, including solvent, ecstasy, and heroin (see Figs. 11, 12, and 13).
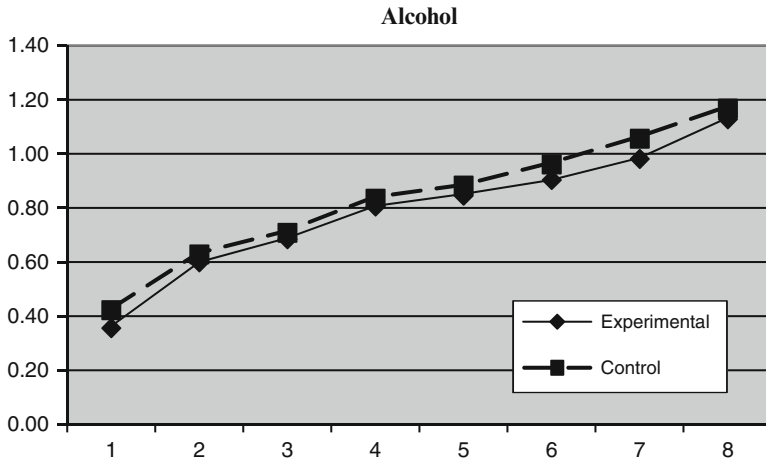
IPS

Fig. 9 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the composite score of illegal drug use (*IPS* mean of ketamine, cannabis, ecstasy, and heroin use) as the outcome indicator

LPS

Fig. 10 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the composite score of legal drug use (*LPS* mean of cough mixture and solvent use) as the outcome indicator
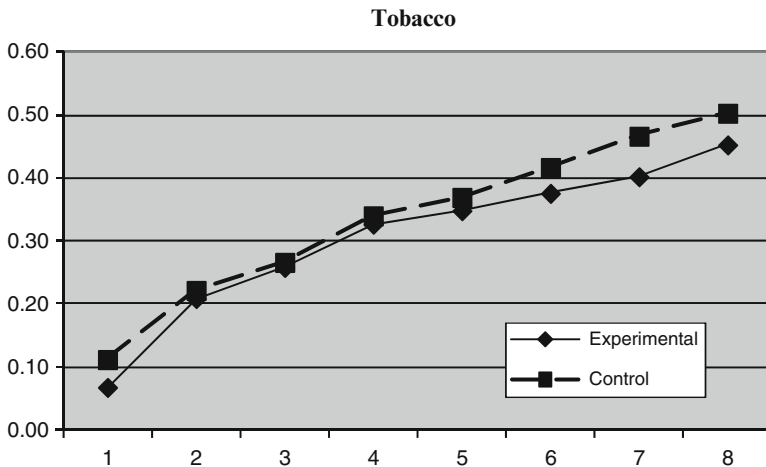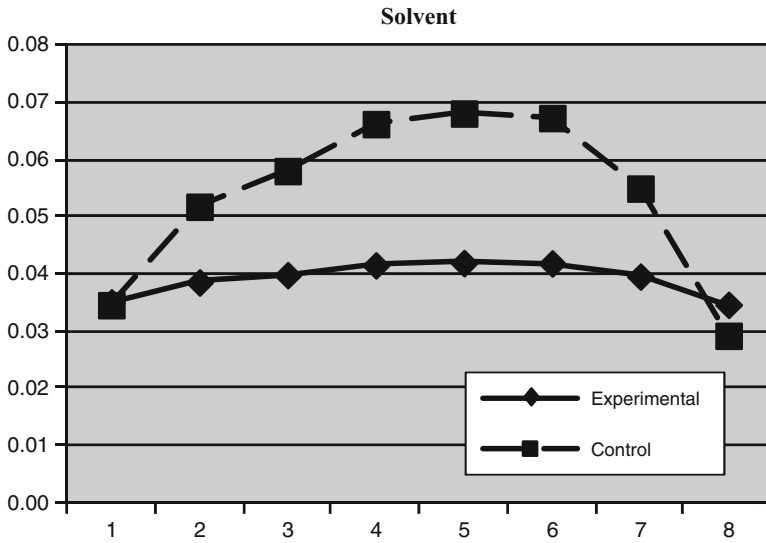
Solvent

Fig. 11 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the item score of solvent use as the outcome indicator
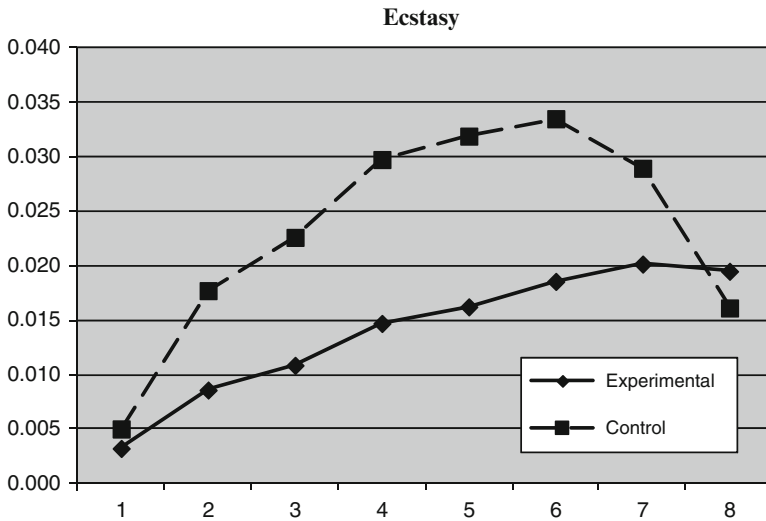
Ecstasy

Fig. 12 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the item score of ecstasy use as the outcome indicator
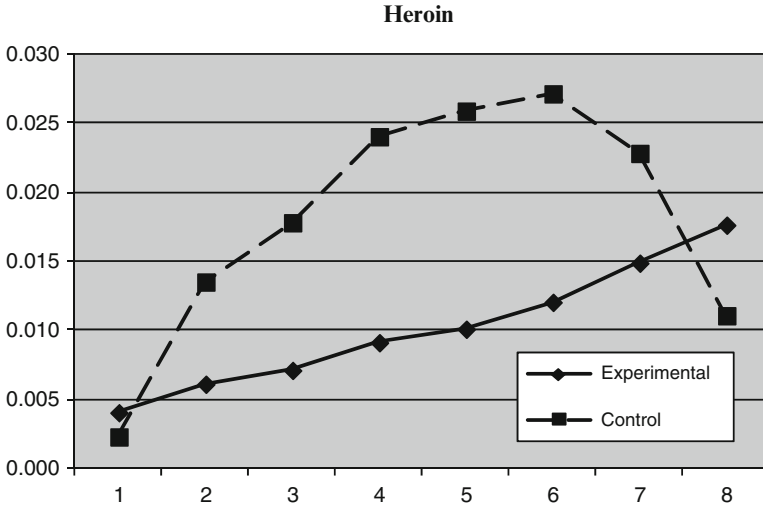
Heroin

Fig. 13 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the item score of heroin use as the outcome indicator
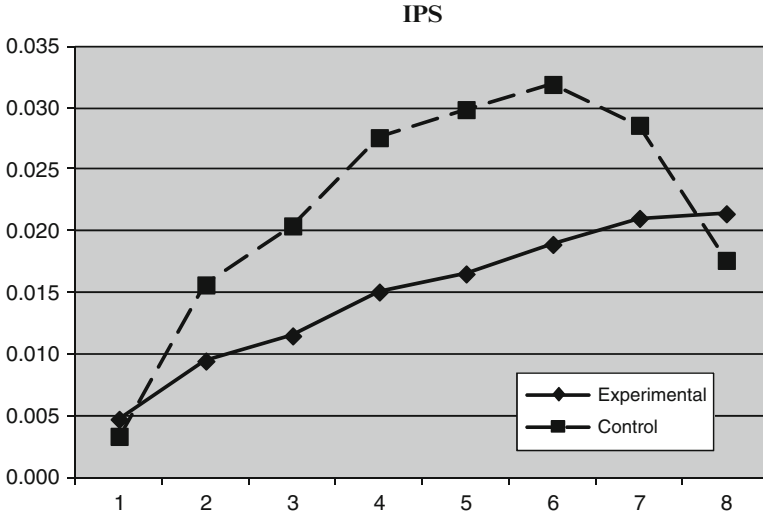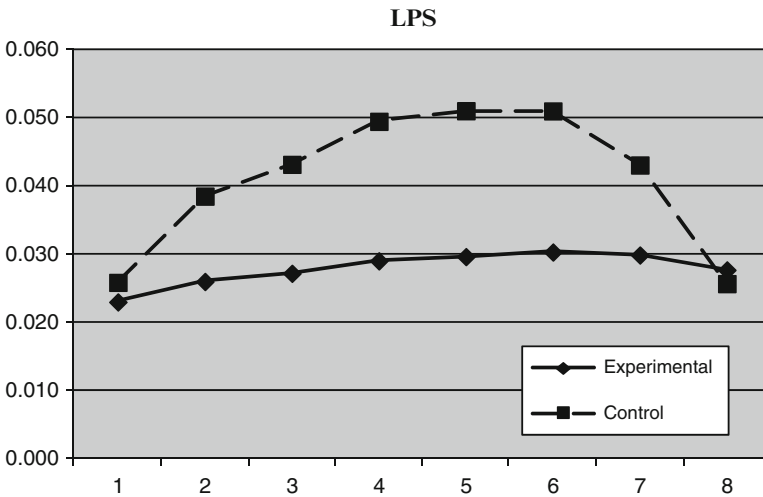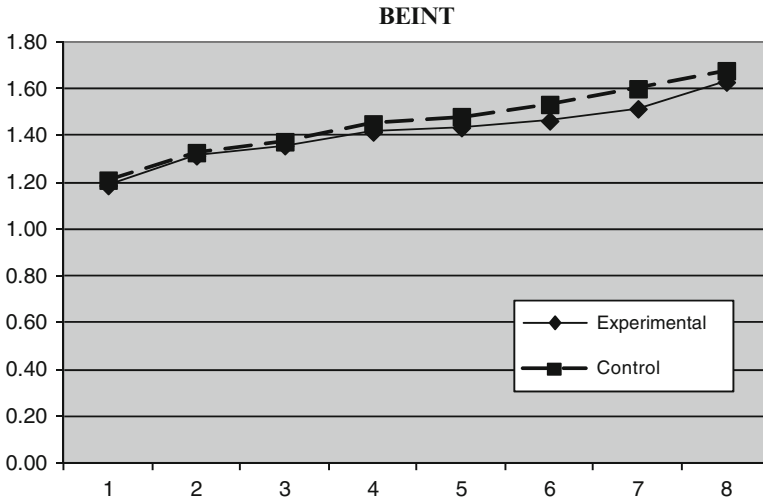
BEINT

Fig. 14 Growth trajectories of the experimental group (participants who perceived the program as effective) and control group using the scale score of problem behavior intention (BEINT) as the outcome indicator

Problem Behavior Intention

Students' intentions of engaging in problem behaviors in the future followed a cubic developmental trajectory. Significant group difference was found on the quadratic ($\beta = -.02$, SE $= .01$, $p < .01$) and cubic slopes ($\beta = .002$, SE $= .001$, $p < .01$), but not on

the linear slope. This means that although the initial linear increase in students' problem behavior intention among the two groups did not differ significantly, the control group displayed a slower deceleration and a faster cubic development than did the experimental group. As seen in Fig. 14, the experimental group consistently showed lower levels of problem behavior intention as compared to the control group across the eight waves.

Discussion

Based on experimental subjects who perceived the program to be beneficial and control subjects, this chapter examined the effects of the Tier 1 Program of the Project P.A.T.H.S. on adolescent risk behaviors over a period of 5 years. Using individual growth curve modeling, the developmental trajectories of adolescent risk behaviors in the experimental group (participants who showed positive evaluation about the program) and in the control group were compared. Both short-term and long-term effects of the program were detected. Given the lack of studies utilizing randomized controlled trial design on the evaluation of youth program in different Chinese societies, the present longitudinal study leads the way in the literature.

The results showed that participants in the experimental schools who perceived the program as beneficial to their development did perform better in different indicators of adolescent risk behaviors as compared to participants in the control group. There are several observations that deserve our attention. First, the experimental participants displayed a lower level of delinquent behavior than did the control participants throughout the eight waves, and the acceleration rate was slower in the experimental group than in the control group on both the delinquency scale score and specific behaviors (damaging others' properties, violence, staying outside home overnight, and trespasses). Second, in terms of different types of substance abuse (alcohol and tobacco, illegal drug, legal drug, alcohol, tobacco, solvent, ecstasy, and heroin), the control participants generally showed a faster rate of increase and a slower rate of deceleration rate than did the experimental participants. Third, compared with the control group, subjects in the experimental group consistently showed lower level of intention to participate in risk behaviors in the future across 5 years; the rate of increase in the experimental group was also slower than that in the control group. Fourth, the program seemed to produce sustained effects in decreasing the occurrence of adolescent risk behaviors after the intervention. Students who participated in the program with positive subjective outcomes continued to score lower on a broad range of youth risk indicators than did the control students after the program had completed. These findings suggest that participants' subjective outcome evaluations do correspond to their objective outcome evaluation and that the Project P.A.T.H.S. has long-term effects in preventing problem behaviors among Hong Kong adolescents. Based on these findings, we may conclude that the Project P.A.T.H.S. is a significant protective factor for students joining the program, which delayed adolescents' involvement in risk behaviors. These observations are basically consistent with those reported in Shek and Yu (2012) but with more pronounced intervention effect.

Another phenomenon we can observe from the figures is that after Wave 6, the developmental trends in the control group changed on a few risk behavior indictors, particularly those with high severity (e.g., violence, trespasses, ecstasy use, and heroin use). The occurrences of these risk behaviors appeared to drop significantly in the control group when students entered into senior secondary schools. One explanation may be that students with severe behavioral problems dropped out from the controlled schools after completing their junior secondary school education. There are many studies showing that adolescent risk behaviors are closely associated with school dropouts (Lynskey & Wayne, 2000; Rice, Kelman, Miller, & Dunmeyer, 1990). In contrast, the developmental pattern of risk behaviors in the experimental schools was steady over the eight waves of data collection, which might be due to the effectiveness of the Project P.A.T.H.S. that successfully prevented students from dropping out of high school. To examine this possibility, further studies could be conducted to compare the percentages of students who had dropped out of school in the control schools and those in the experimental schools. If this assumption can be proved, the implication would be that prevention and intervention of youth risk behaviors, such as the Project P.A.T.H.S., must be implemented as early as possible to avoid school dropouts in adolescents.

In conclusion, the current findings reinforce previous objective outcome evaluation findings based on both general linear models (Shek et al., 2008) and linear mixed methods (Shek & Ma, 2012; Shek & Yu, 2012) and suggest that the Project P.A.T.H.S. is an effective approach to youth risk behavior prevention. These findings also indicate that in order to have a broad understanding about a program, it is important to take into account the perceived benefits from the perspective of the program participants.

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Subjective Outcome Evaluation Based on the Program Participants: Does Dosage Matter?

Daniel T.L. Shek and Hildie Leung

Introduction

"Pan, who and what art thou?" he cried huskily.

"I'm youth, I'm joy," Peter answered at a venture, "I'm a little bird that has broken out of the egg."

> – J. M. Barrie from Peter Pan (Barrie, 1928)

Adolescence is a period of transition marked by both joys and trials. As adolescents grow and parents relinquish control, their once-sheltered world opens up and they are like birds breaking free of their shells and seeing the bright skies. However, the skies are not without clouds, the world is full of temptations, and young people face intense challenges (Wagner, 1996). Adolescents' increased access to adult privileges, such as autonomy, status, and material resources, comes into conflict with their cognitive, psychological, physiological, and social changes (Sentse, Dijkstra, Lindenberg, Ormel, & Veenstra, 2010). As a result, some youngsters may not know where to go and stray from a healthy path, without understanding the dangers therein. Research suggests that at the beginning of adolescence, youngsters are vulnerable to the engagement of risk or problem behaviors, such as youth violence, substance abuse, and high-risk sexual behavior (Agnew, 2003; Biglan, Brennan, Foster, & Holder, 2004). To tackle adolescent developmental problems, a growing number of prevention and positive youth development programs have been designed

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specifically for budding adults. The confidence in these interventions is based on empirical evidence from studies conducted with rigorous methodologies. However, a review of the literature shows that while there is an abundance of related programs in the West, very few programs exist in the Chinese culture, with the possible exception of the Project P.A.T.H.S. (Catalano et al., 2012).

Over the last two decades, great attention has been devoted to the development of school-based prevention and youth development programs targeted at adolescent developmental problems, particularly in the Western context. Significant increases in the number and breadth of evidence-based programs are apparent (Gottfredson & Wilson, 2003; Payne & Eckert, 2010). Given this surge of programs, private and public funders, practitioners, and recipients require greater accountability and do so by asking the following questions: "What evidence-based programs work?", "What is the essence of good prevention programs?" (Hardcastle, Blake, & Hagger, 2012). Focused on answering the first question, traditional evaluation studies on adolescent prevention programs have been based primarily on objective outcome evaluation (e.g., Shek & Yu, 2012) with program implementation (i.e., what a program consists of in its deliverance) overlooked. Dane and Schneider (1998) examined mental health prevention studies published between 1980 and 1994 and found that only 24 % of the studies had described steps about documenting program implementation. Similarly, Durlak (1997) reported that less than 5 % of over 1,200 published prevention studies had investigated the effects of implementation on outcomes, and Domitrovich and Greenberg (2000) found merely 13 of 32 reviewed mental health prevention programs which conducted analyses relating implementation to outcomes.

In recent years, researchers have attempted to place more emphasis on the assessment of program implementation (Dane & Schneider, 1998; Durlak & DuPre, 2008). Implementation is multifaceted and can be measured in numerous ways. These include fidelity (the extent to which the program is implemented in correspondence to its original intended design), dosage (how much the program has been delivered), quality (how well the components are delivered), participant responsiveness (attentiveness of program recipients), program differentiation (uniqueness of the program as distinguished from its counterparts), monitoring (observing the nature and amount of service received by participants), program reach (involvement rate and representativeness of service recipients), and adaptation (alterations made during implementation as compared to the original program). These eight dimensions vary across programs and each of them has been demonstrated to influence program outcomes.

Among the eight factors proposed by Durlak and DuPre (2008), program dosage was highlighted as one that deserves attention. Dosage refers to the quantity or amount of the program delivered. It can be operationalized by the number of sessions, session lengths, spacing of sessions, or the overall duration of the program. The principle of sufficient dosage highlights the need for participants to be exposed sufficiently to the intervention for them to have the desired effect (Nation et al., 2003). An extensive review of 162 studies found that only 6 studies reported dosage effects on program outcome. It was reiterated that more research into this issue is warranted (Dane & Schneider, 1998). But how much is sufficient? Is more

necessarily better? The answers to these questions remain thorny, as the relation between dosage and program effectiveness is inconclusive. Some empirical studies suggest a positive dose-effect relationship. For instance, in their evaluation of two school-based drug prevention programs targeted at elementary and middle school students, Ferrer-Wreder and her colleagues (2010) found that a higher program dosage level resulted in an improvement of students' assertive skills, anxiety management skills, and a decrease in drug use intentions. Similarly, in Valentine, Gottlieb, Keel, Griffith, and Ruthhazer's (1998) evaluation of a substance abuse prevention program, the benefits of increased program exposure on social coping and school performance, especially for high-risk secondary school students, were also identified. Charlebois, Brendgen, Vitaro, Normandeau, and Boudreau (2004) examined the effects of dosage on the post-intervention academic performance and behaviors of disruptive young boys who attended a 3-year school-based prevention program focused on improving their social skills. Findings from the study revealed a positive dosage effect – participants who attended more program sessions were rated as more likable by their peers, and their post-intervention academic performance was also enhanced. Different reasons have been accounted for the observed positive dosage effect. First, the opportunity for repetitive practicing of skills increases with the number of sessions participants attend. Setting routines for repeated practice facilitates the nurturance of habits and repetition may lead to the automaticity of certain skills (Duke, Simmons, & Cash, 2009). Second, students are often encouraged by program implementers to attempt and persevere to complete assigned tasks during program sessions (Charlebois et al., 2004). As program sessions increase, the amount of tasks participants are able to accomplish are likely to increase accordingly. As a result, students may gain a sense of achievement that serves as an intrinsic reward. This sense of efficacy may, in turn, act as a motivation for positive behaviors. Besides acquisition of skills, it can be argued that some sessions of a program can help the program participants to develop positive attitudes and values.

On the other hand, there are studies which do not support the relationship between dosage and program effectiveness. For example, a review of 130 secondary prevention mental health interventions targeted at children and adolescents with presenting internalized or externalized problem behaviors, adjustment problems, poor peer relations, and low levels of academic performance showed that the effectiveness of programs did not depend on dosage (Durlak & Wells, 1998). Given these inconsistent findings, more research on the dose-effect relationship would be useful for future applications of prevention and positive youth development programs on how much exposure is needed to achieve certain intervention goals.

Shek and Sun (2012) reported subjective outcome evaluation findings based on the perspective of the participants of nine datasets collected from 2005 to 2009 ($N = 206,313$ program participants). The overall profile showed that the participants generally had positive perceptions of the program, implementers, and benefits of the program. Adopting the same dataset, we focused on examining whether students' perceptions of the program content, implementers, or effectiveness would differ between those who participated in the 10-h core program and the 20-h full program in this study.

Methods

Participants and Procedures

From 2005 to 2009, a total of 713 schools (i.e., Secondary 1 level, 330 schools; Secondary 2 level, 250 schools; and Secondary 3 level, 133 schools) joined the 10-h program, and 614 schools (Secondary 1 level, 339 schools; Secondary 2 level, 193 schools; and Secondary 3 level, 82 schools) joined the 20-h program. Altogether, 223,101 students participated in the Tier 1 Program across the 5 years (Table 1). Upon completion of the Tier 1 Program, students were invited to respond to the Subjective Outcome Evaluation Form for Students (Form A) developed by the first author. For the 10-h program, 111,696 questionnaires were completed, and for the 20-h program, 94,640 questionnaires were completed. A 92.48 % overall response rate was achieved.

Data collection was conducted during the last session of the program (Shek & Sun, 2012). Form A (Ma & Shek, 2010; Shek & Ma, 2007; Shek & Sun, 2008) was used to measure program participants' perceptions of the Tier 1 Program. Broadly speaking, this evaluation form consisted of several sections: (a) participants' perceptions of the program (10 items), (b) participants' perceptions of the implementers (10 items), (c) participants' perceptions of the effectiveness of the program (16 items), (d) the extent to which the participants would recommend the program to other people with similar needs or join the program again (2 items), (e) overall satisfaction with the program (1 item), (f) things that the participants learned from the program and appreciated most (open-ended questions), and (g) opinions about the implementers and areas that require improvement (open-ended questions).

Results

Quantitative findings based on the closed-ended questions are presented in this chapter. Reliability analysis with the schools as the unit of analyses showed that Form A was internally consistent (Table 2): 10 items related to the program ($\alpha = .98$), 10 items related to the implementers ($\alpha = .99$), 16 items related to the benefits ($\alpha = 1.00$), and the overall 36 items measuring program effectiveness ($\alpha = .99$). First, participants generally had positive perceptions of the program in both the 10-h and the 20-h programs (Table 3). For instance, participants in both types of program perceived that the objectives of the curriculum were clear (10-h program, 83.32 %, and 20-h program, 83.64 %), the teaching activities were well planned (10-h program, 81.43 %, and 20-h program 81.78 %), and that there was much interaction among students (10-h program, 81.44 %, and 20-h program, 81.57 %). Second, a high proportion of the participants had positive evaluation of the implementers' performance in both dosages of implementation (Table 4). Particularly, the participants thought that the implementers were highly involved

Table 1 Description of data characteristic from 2005 to 2009

	S1				S2			S3	
	2005/2006 (EIP-S1)	2006/2007 (FIP-S1)	2007/2008 (FIP-S1)	2008/2009 (FIP-S1)	2006/2007 (EIP-S2)	2007/2008 (FIP-S2)	2008/2009 (FIP-S2)	2007/2008 (EIP-S3)	2008/2009 (FIP-S3)
Total schools joined P.A.T.H.S.	52	207	213	197	49	196	198	48	167
(i) 10-h program	23	95	108	104	27	113	110	29	104
(ii) 20-h program	29	112	105	93	22	83	88	19	63
Tier 1 Program:									
Mean no. of sessions of program implementation	17.75 (3–50)	23.55 (2–50)	23.61 (5–60)	23.54 (5–65)	23.76 (10–40)	22.81 (7–60)	23.04 (4–48)	24.07 (10–44)	22.78 (7–66)
No. of schools incorporated into formal curriculum	21	101	116	98	26	108	99	30	85
No. of schools incorporated into others mode	31	106	97	99	23	88	99	18	82
Mean no. of classes per school	4.58 (2–7)	4.66 (1–8)	4.69 (1–8)	4.56 (1–8)	4.51 (1–7)	4.62 (1–8)	4.64 (1–8)	4.56 (1–8)	4.67 (1–8)
Total no. of students	8,679	35,735	36,343	31,280	8,167	33,449	33,583	7,708	28,157
Mean no. of students per school	166.9 (37–240)	172.63 (17–280)	171.05 (16–267)	158.78 (5–251)	166.67 (32–240)	170.66 (12–280)	169.61 (15–263)	160.58 (26–240)	168.60 (28–240)
Total no. of student respondents	8,057	33,693	33,867	29,100	7,406	30,731	31,197	6,830	25,432
Mean no. of student respondents per school	154.94 (37–212)	162.77 (15–265)	159 (14–267)	147.72 (3–251)	151.14 (32–220)	156.80 (12–243)	157.56 (15–263)	142.29 (23–213)	152.29 (22–229)

Table 2 Means, standard deviations, Cronbach's alphas, and mean of inter-item correlations among the variables by dosage of implementation

	10-h program		20-h program		Overall	
	M (SD)	α (Mean[#])	M (SD)	α (Mean[#])	M (SD)	α (Mean[#])
Program content (10 items)	4.25 (.31)	.99 (.88)	4.27 (.31)	.98 (.86)	4.26 (.31)	.98 (.87)
Program implementers (10 items)	4.57 (.31)	.99 (.95)	4.62 (.30)	.99 (.94)	4.59 (.31)	.99 (.94)
Program effectiveness (16 items)	3.36 (.28)	1.00 (.94)	3.37 (.27)	1.00 (.95)	3.36 (.28)	1.00 (.94)
Total effectiveness (36 items)	3.94 (.28)	.99 (.81)	3.97 (.27)	.99 (.82)	3.95 (.28)	.99 (.82)

[#]Mean inter-item correlations

Table 3 Summary of the students' perception toward the program

	Respondents with positive responses (options 4–6)					
	10-h program		20-h program		Overall	
	N	%	N	%	N	%
1. The objectives of the curriculum are very clear	92,395	83.32	78,699	83.64	171,094	83.50
2. The design of the curriculum is very good	88,237	79.64	74,978	79.79	163,215	79.75
3. The activities were carefully planned	90,075	81.43	76,715	81.78	166,790	81.76
4. The classroom atmosphere was very pleasant	87,975	79.64	74,195	79.23	162,170	79.91
5. There was much peer interaction among the students	89,639	81.44	76,084	81.57	165,723	81.84
6. I participated actively during lessons (including discussions, sharing, games, etc.)	89,105	80.55	75,847	80.83	164,952	80.65
7. I was encouraged to do my best	84,789	76.67	71,805	76.55	156,594	76.88
8. The learning experience I encountered enhanced my interest toward the lessons	84,422	76.53	71,777	76.76	156,199	76.78
9. Overall speaking, I have very positive evaluation of the program	83,898	75.94	71,407	76.18	155,305	76.47
10. On the whole, I like this curriculum very much	84,360	76.52	71,922	76.92	156,282	76.86

Note: All items are on a 6-point Likert scale with 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=strongly agree. Only respondents with positive responses (options 4–6) are shown in the table

(10-h program, 88.20 %, and 20-h program, 88.98 %), were ready to help them when needed (10-h program: 87.76 % and 20-h program: 88.49 %), and encouraged them to participate in activities (10-h program, 87.73 %, and 20-h program, 88.52 %). Third, as shown in Table 5, participants in both dosages of implementation perceived

Table 4 Summary of the students' perception toward the performance of program implementers

| | Respondents with positive responses (options 4–6) | | | | | |
| | 10-h program | | 20-h program | | Overall | |
	N	%	N	%	N	%
1. The instructor(s) had a good mastery of the curriculum	94,686	85.81	81,415	86.61	176,101	86.41
2. The instructor(s) was well prepared for the lessons	96,363	87.38	83,093	88.45	179,456	87.91
3. The instructor(s)' teaching skills were good	94,135	85.47	80,729	86.21	174,864	85.88
4. The instructor(s) showed good professional attitudes	95,780	86.97	82,526	87.97	178,306	87.47
5. The instructor(s) was very involved	97,155	88.20	83,454	88.98	180,609	88.63
6. The instructor(s) encouraged students to participate in the activities	96,561	87.73	83,033	88.52	179,594	88.12
7. The instructor(s) cared for the students	94,678	85.97	81,208	86.58	175,886	86.34
8. The instructor(s) was ready to offer help to students when needed	96,619	87.76	82,971	88.49	179,590	88.22
9. The instructor(s) had much interaction with the students	92,770	84.21	79,431	84.65	172,201	84.71
10. Overall speaking, I have very positive evaluation of the instructors	96,815	87.76	83,146	88.47	179,961	88.22

Note: All items are on a 6-point Likert scale with 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=strongly agree. Only respondents with positive responses (options 4–6) are shown in the table

that the program promoted their development in different domains, including their moral competence (10-h program, 84.22 %, and 20-h program, 84.12 %), competence in making sensible and wise choices (10-h program, 82.86 %, and 20-h program, 83.13 %), ability to resist harmful influences (10-h program, 82.67 %, and 20-h program, 82.56 %), and overall development (10-h program, 83.18 %, and 20-h program, 83.30 %).

To examine the differences in the subjective outcome measures (i.e., program content, program implementers, and program effectiveness) across the two dosages of implementation, a series of one-way ANOVAs were conducted with the respective outcome measures as dependent variables and program dosage (i.e., 10 h vs. 20 h) as the independent variable. Results revealed that participants' view toward the program implementers differed significantly between the 10- and 20-h programs, $F(1, 1,322)=9.53, p<.01$. Specifically, participants had a more positive view ($M=4.62$, SD=.30) toward the program implementers in the 20-h program compared to those in the 10-h program ($M=4.57$, SD=.31). However, no significant differences were found in participants' view toward program content and program effectiveness. Regardless of whether respondents participated in the 10- or 20-h program, their perceptions toward the program and its effectiveness were similar.

Table 5 Summary of the students' perception toward the program effectiveness

The extent to which the Tier 1 Program (i.e., the program in which all students have joined) has helped your students	Respondents with positive responses (options 3–5)					
	10-h program		20-h program		Overall	
	N	%	N	%	N	%
1. It has strengthened my bonding with teachers, classmates and my family	85,687	77.51	72,499	77.21	158,186	77.43
2. It has strengthened my resilience in adverse conditions	87,947	79.60	75,195	80.15	163,142	79.85
3. It has enhanced my social competence	90,621	82.17	77,015	82.21	167,636	82.11
4. It has improved my ability in handling and expressing my emotions	89,851	81.46	76,174	81.36	166,025	81.35
5. It has enhanced my cognitive competence	89,566	81.24	75,830	80.97	165,396	81.05
6. My ability to resist harmful influences has been improved	91,121	82.67	77,320	82.56	168,441	82.52
7. It has strengthened my ability to distinguish between the good and the bad	92,834	84.22	78,735	84.12	171,569	84.05
8. It has increased my competence in making sensible and wise choices	91,345	82.86	77,771	83.13	169,116	82.88
9. It has helped me to have life reflections	88,632	80.40	75,918	81.08	164,550	80.91
10. It has reinforced my self-confidence	86,969	78.93	73,814	78.87	160,783	78.71
11. It has increased students' self-awareness	88,752	80.49	75,533	80.75	164,285	80.52
12. It has helped students to face the future with a positive attitude	89,341	81.09	76,301	81.56	165,642	81.33
13. It has helped students to cultivate compassion and care about others	90,032	81.72	76,391	81.61	166,423	81.75
14. It has encouraged students to care about the community	87,085	79.03	73,891	79.13	160,976	79.11
15. It has promoted students' sense of responsibility in serving the society	88,316	80.08	75,241	80.50	163,557	80.22
16. It has enriched the overall development of the students	91,687	83.18	77,897	83.30	169,584	83.24

Note: All items are on a 5-point Likert scale with 1=unhelpful, 2=not very helpful, 3=slightly helpful, 4=helpful, 5=very helpful. Only respondents with positive responses (options 3–5) are shown in the table

Discussion

Generally speaking, the present study showed that the program was well received by participants in both the 10- and 20-h programs. For instance, in terms of program content, the majority of the respondents stated that the objectives of the curriculum were clear and well-designed, and the activities were carefully planned. Furthermore, students were highly interested in and enthusiastic about the program, as they reported that they participated actively during lessons. In terms of program effectiveness, students across both dosages of implementation indicated that the program has helped to strengthen their competencies across a wide array of domains: cognitively, psychologically, and socially. Specifically, regardless of whether they participated in the 10- or 20-h program, upon completion of all units, students stated that their cognitive competence was strengthened and that they were more able to make wise and sensible choices. In addition, their self-confidence was reinforced, and they reported that they would be more resilient in future encounters of adverse conditions. Socially, the program has helped to increase participants' sense of compassion and care about others and the community while successfully promoting students' sense of civic responsibility. The findings are generally consistent with those reported in Shek and Sun (2012).

An interesting finding from the results is the significant difference in students' perceptions of the program implementers across the two levels of program dosage. There are several explanations for this finding. First, students who participated in the 20-h program had the opportunity to spend more time with the program implementers over the span of the school term, as opposed to those who participated in the 10-h program. The above observation may be explained in terms of mere exposure effect (Gurung & Burns, 2011) which is applicable to the educational setting. According to Zajonc (1968), mere exposure effect refers to the fact that the more an individual sees someone, the more he/she will like that person. Moreland and Topolinski (2010) explained that as someone becomes more familiar with another person, he/she will perceive that person as being more similar to oneself and will simultaneously feel that the person is more likeable.

Second, as self-reflection and sharing are emphasized in the Project P.A.T.H.S., such elements would be stronger in programs with higher dosage. With more self-reflection and sharing, the program participants may like the implementers more. A comprehensive study involving the observations of over 800 classrooms across the United States found that levels of student engagement and positive interaction among peers were higher and more frequently observed in classrooms that were rated high on emotional and instructional support. Instructors in these classrooms were also responsive to students and promoted positive social interactions. Students and instructors under such circumstances engaged in high-quality conversational exchanges (National Institute of Child Health and Human Development and Early Child Care Research Network, 2002). Van de Grift (2007) also found that a safe and

stimulating climate was positively related to student engagement. Indeed, students need to feel that they are in an environment that is safe for sharing, one that they will not be judged by others, particularly, the program implementers.

Third, adopting the perspective of attachment theories (Bowlby, 1969), programs with high dosage may help to strengthen the relationship between a student and a teacher which is analogous to the relationship between a child and his/her caregiver. It is argued that secure and reciprocal attachments are important for students to engage in their relationships with teachers and to develop a healthy self-concept and a sense of well-being (Cornelius-White, 2007). Besides, a secure and reciprocal relationship between program implementers and participants is characterized by positive interdependency, similar to the notion of cooperative learning which would contribute to the healthy development of program participants. These attributes would then result in more positive perceptions of the program implementers.

The above attachment perspective is also found in the contemporary learner-centered approach. The learner-centered approach demands that students be responsible for setting their own learning objectives and be intrinsically motivated toward achieving these objectives. Students are expected to be more engaged in the learning process (Duncan & Buskirk-Cohen, 2011). Cambourne (2002) proposed that learners are more likely to be engaged in demonstrations or activities that are free from anxiety. In addition, learners are also more engaged with activities that are conducted by someone they like, respect, admire, and trust. Likewise, we believe that in order for youngsters to be engaged in the activities and demonstrations pertinent to the development of the positive youth constructs and to be able to gain the most out of each designed unit, it is vital that learners (i.e., program participants, in our case) have a positive perception of the program implementers. It is undeniable that respect, admire, and trust are elements that take time to build in every relationship, and that between program implementers and participants is of no exception.

Finally, the dosage effect on participants' perception of their program implementers can also be attributed to the increased opportunity for teachers and social workers to disclose themselves in the 20-h program as opposed to the 10-h program. Self-disclosure refers to "a teacher's sharing of personal and professional information about himself or herself in a believable way" (Goldstein & Benassi, 1994, p. 212) and the revelation of teachers' past experiences, stories, genuine feelings, and thoughts. When self-disclosure is utilized appropriately, whereby the teacher shares and demonstrates the attributes of empathy, genuineness, and respect, a safe relationship between teachers and students can then be fostered (Lau & Shek, 2010). A large part of the curriculum in the Project P.A.T.H.S. emphasizes self-disclosure of implementers to encourage sharing in the classroom. Program implementers in the 20-h program undoubtedly have more opportunities for self-disclosure when delivering the program elements, as compared to those in the 10-h program.

There are several limitations of the current study that should be noted when interpreting the results. First, in our present study, dosage was operationalized as the total number of program hours in which adolescents participated in the program. Yet, it is noteworthy that there are other methods of operationalization for dosage (e.g., session spacing, the length of each session). For instance, research on memory

and learning has demonstrated the differential effects of spaced versus massed learning on memory (Ebbinghaus, 1964). Therefore, it is possible that the spacing of program sessions may influence program effectiveness. In order to gain a more comprehensive picture of the effects of dosage on program implementation, it would thus be useful for future studies to consider operationalizing dosage in alternative manners. Second, the use of self-report measure from the single perspective of students reveals only one side of the story. The process of program implementation involves both program implementers and participants; hence, the inclusion of program implementers' views on the effect of dosage on program effectiveness would certainly illuminate the issue.

We believe that the question researchers ask should not merely be whether more is better. To implement a lengthy prevention or positive youth development program that is loosely developed would be meaningless. It may sound cliché, but the quality over quantity rule applies also to the evaluation of program effectiveness. Dosage is only one of the variables among the constellation of program implementation factors that must be considered. To conclude, a qualitative comment provided by one of the teachers who participated in the Project P.A.T.H.S. program implementers training workshop sums up this notion nicely,

> "… Among the program implementers training workshops that I have attended in the past three years, I have gained the most from the workshop this year, because I now understand that adolescents' developmental journey is one that we build collaboratively. Teaching a class of one hour is not an easy task, but you [the program trainers] have given us 20 hours of training in three days' time. We go on to teach our students for another 20 hours; I believe it [this teaching] goes as 20.20.20… and continues on. I hope that our children will continue to grow and develop. I will not think about the outcomes at this moment, but in my opinion, this Program [the Project P.A.T.H.S.] is indispensable."

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Subjective Outcome Evaluation Based on the Perceptions of the Program Implementers

Cecilia M.S. Ma and Daniel T.L. Shek

Introduction

Positive youth development has emerged as a prominent approach in helping adolescents by increasing their exposure to growth-promoting opportunities and supportive atmosphere (Bearinger, Sieving, Ferguson, & Sharma, 2007; Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002; Lerner, Fisher, & Weinberg, 2000). Empirical evidence supports the beneficial effects of positive youth development programs in facilitating adolescent behavioral and emotional functioning (Catalano et al., 2002; Durlak & Weissberg, 2005, 2007; Kegler, Young, Marshall, Bui, & Rodine, 2005). Despite the significance of these findings, it is not clear whether its effectiveness could be replicated in different contexts due to the complex nature of program implementation process and its interaction with other contextual factors, such as organizational culture, treatment parameters, and individual characteristics (Dane & Schneider, 1998; Durlak & Weissberg, 2007). Gallagher, Stanley, Shearer and Mosca (2005) noted that "although many would agree that the (positive) youth development model has substantial merit, much remains to be learned about how such programs can be established in community settings" (p. S61). Therefore, examination of the related program effectiveness in diverse backgrounds and populations is warranted.

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In the field of evaluation, the majority of studies are conducted by the researchers. Recently, there is a call for examining the role of stakeholders' participation in the evaluation process. When enlisting help from the stakeholders, evaluators would have a better understanding of evaluation questions and identify the needs and problems of the program participants, thereby enhancing the validity of the study's findings (Brandon, 1998). The beneficial effects of the stakeholder involvement have been shown in capacity building (Baker & Bruner, 2006; Bowen & Martens, 2006), organizational learning (Forss, Rebien, & Carlsson, 2002; Taut, 2007), and utilization of evaluation results (Wallace, 2008). Similar results are shown in the Chinese contexts (Lee, 2008; Shek & Ma, 2012; Shek & Ng, 2011). However, little is known whether such effects would be affected by program design (e.g., dosage, delivery method). To grasp a more comprehensive picture regarding perceived program attributes and effectiveness, more research in this area is needed.

The Project P.A.T.H.S. is a large-scale positive youth development program designed for junior secondary school students (Secondary 1–3, i.e., Grades 7–9) in Hong Kong. After completion of the program, program implementers were required to complete a 36-item Subjective Outcome Evaluation Form (Form B). Previous studies using this instrument generally showed that program implementers were satisfied and perceived the program positively (Shek & Ma, 2008; Shek, Ma & Tang, 2011; Shek & Ng, 2011; Shek, Sun, & Lung, 2008).

In a comprehensive integration of the existing findings based on nine datasets collected from 2005 to 2009 (244 schools and 7,926 participants), Shek and Ma (2012) showed that the program implementers perceived the program, implementers, and benefits in a favorable light. However, there are several limitations of Shek and Ma's study. First, it gives an overall picture about subjective outcome evaluation based on the data that were aggregated at the school level. Researchers highlighted that the use of aggregate data might lead to the loss of information and the increase in chance of ecological fallacies (Aitkin & Longford, 1986; Alker, 1969; Freedman, 2001). Therefore, it would be equally important to study the factors related to program effectiveness by using individual-level data.

Second, as there are two modes of implementation in the Project P.A.T.H.S. (10-h and 20-h programs), it would be interesting to look at the related findings under these two modes. Dane and Schneider (1998) defined dosage as the extent to which the original program was delivered (e.g., the number of hours, frequency of participation, duration of the intervention). The beneficial effects of dosage on program outcome are well documented. For example, Chinman et al. (2008) found that the number of program hours was positively associated with better improvement in the program implementation process. A 3-year longitudinal program process evaluation study revealed that changes in the staff training, reformatting the intervention manual, and tracking of participants' attendance were related to the dosage and fidelity of program implementation (Wilson et al., 2009). This is further supported by a meta-analysis study, in which the role of program dosage on influencing the program outcomes was highlighted (Durlak & DuPre, 2008). However, nonsignificant relationships were also reported in other studies (Malvin, Moskowitz, Schaeffer, & Schaps, 1984; McCreary et al., 2010; Moskowitz, Schaps, Schaeffer, & Malvin, 1984).

Clearly, more research is needed to examine different aspects of implementation in order to have a better understanding of how programs are operated effectively in different contexts, thereby bridging the gap between research and practice.

Lastly, as the factor structure of Form B has not been empirically studied in depth, it would be important to look at this aspect. Researchers highlighted the importance of using psychometrically sound instruments to "build data-driven continuous improvement systems designed to ensure the delivery of high quality programming" (Yohalem & Wilson-Ahlstrom, 2010, p. 356). Durlak and DuPre (2008) suggested future research should test the reliability and validity of implementation measures to shed light on studying the relationship between implementation and program outcomes. In response to this call, the psychometric properties of this 36-item subjective outcome evaluation instrument were examined in this chapter.

There are several purposes of this chapter. First, perceptions of the program in terms of program content, implementers, and benefits under the 10-h and 20-h modes were examined. Second, whether there were differences in the 10-h and 20-h programs in terms of subjective outcome evaluation ratings was examined. Third, the predictive role of perceived program quality and implementer quality on perceived benefits was investigated. Finally, the internal consistency and factor structure of the Subjective Outcome Evaluation Form (Form B) was studied.

Methods

Participants and Procedures

There were a total of 216 schools that joined the Project P.A.T.H.S. in the third year of the Full Implementation Phase in the school year 2008–2009 (Secondary 1: 197 schools; Secondary 2: 198 schools; Secondary 3: 167 schools). In three forms, the mean number of students per school was 165.52 (ranged from 5 to 263 students), with an average of 4.62 classes per school (ranged from 1 to 8 classes). Among them, 43.40 % of the respondent schools adopted the full program (i.e., 20-h program involving 40 units), whereas 56.60 % of the respondent schools adopted the core program (i.e., 10-h program involving 20 units). The mean number of sessions used to implement the program was 23.14 (ranged from 4 to 66 sessions). While 50.18 % of the respondent schools incorporated the program into the formal curriculum (e.g., Liberal Studies, Life Education), 49.82 % used other modes (e.g., using class teacher's periods and other combinations) to implement the program. The mean numbers of social workers and teachers implementing the program per school per form were 1.73 (ranged from 0 to 10) and 5.56 (ranged from 0 to 28), respectively. In this chapter, a total of 1,403 completed Form B from two grade levels (i.e., Secondary 1: 699, and Secondary 2: 704) were examined.

After the Tier 1 Program was completed, the implementers were invited to respond to a Subjective Outcome Evaluation Form for Instructors (Form B) developed by the research team of the project. To facilitate the program evaluation, the

research team developed an evaluation manual with standardized instructions for collecting the subjective outcome evaluation data. In addition, adequate training was provided to the implementers during the 20-h training workshops on how to collect data Form B and how to analyze the data.

Instruments

The Subjective Outcome Evaluation Form (Form B) consists of several parts as follows:

- Program implementers' perceptions of the program (10 items)
- Program implementers' perceptions of their own practice (10 items)
- Implementers' perceptions of the effectiveness of the program on students (16 items)
- The extent to which the implementers would recommend the program to other students with similar needs (1 item)
- The extent to which the implementers would teach similar programs in future (1 item)
- The extent to which the program implementation has helped the implementers' professional growth (1 item)
- Things that the implementers obtained from the program (open-ended question)
- Things that the implementers appreciated most (open-ended question)
- Difficulties encountered (open-ended question)
- Areas that require improvement (open-ended question)

For the quantitative data, the implementers collecting the data were requested to input the data in an Excel file developed by the research team which would automatically compute the frequency and percentage associated with the rating for each item. When the schools submitted the reports, they were also requested to submit the soft copy of the consolidated data sheets. After receiving the consolidated data by the funding body, the data were aggregated to "reconstruct" the overall profile by the research team.

Results

Several observations are highlighted from the findings. First, the participants generally had positive perceptions of the program (Table 1), including clear objectives of the curriculum (10-h, 94.0 %; 20-h, 96.4 %), well-planned teaching activities (10-h, 90.9 %; 20-h, 92.8 %), and a strong and sound theoretical support (10-h, 85.7 %; 20-h, 87.6-%). Second, a high proportion of the workers had positive evaluation of their performance (Table 2), including good professional attitudes (10-h, 96.9 %; 20-h, 96.7 %), high level of involvement (10-h, 94.2 %; 20-h, 95.1 %), and readiness

Table 1 Summary of the views of the program implementers of the program

	Participants with positive responses (options 4–6)			
	10-h		20-h	
	N	%	N	%
1. The objectives of the curriculum are very clear	422	94.0	241	96.4
2. The design of the curriculum is very good	388	86.6	221	88.4
3. The activities were carefully planned	408	90.9	232	92.8
4. The classroom atmosphere was very pleasant	394	87.9	233	93.6
5. There was much peer interaction among the students	388	86.8	230	92.4
6. Students participated actively during lessons (including discussions, sharing, games, etc.)	288	86.4	226	91.1
7. The program has a strong and sound theoretical support	384	85.7	219	87.6
8. The teaching experience I encountered enhanced my interest in the course	355	79.2	209	83.9
9. Overall speaking, I have very positive evaluation of the program	364	81.1	217	86.8
10. On the whole, students like this curriculum very much	366	82.2	208	83.9

Table 2 Summary of the views of the program implementers about themselves

	Participants with positive responses (options 4–6)			
	10-h		20-h	
	N	%	N	%
1. I have a good mastery of the curriculum	399	89.3	217	88.6
2. I prepared well for the lessons	398	89.0	216	88.9
3. My teaching skills were good	404	90.4	211	86.0
4. I have good professional attitudes	433	96.9	238	96.7
5. I was very involved	419	94.2	232	95.1
6. I gained a lot during the course of instruction	377	84.9	222	91.0
7. I cared for the students	440	98.9	242	98.8
8. I was ready to offer help to students when needed	443	99.1	240	98.8
9. I had much interaction with the students	420	94.4	232	95.1
10. Overall speaking, I have very positive evaluation of myself as an instructor	433	96.9	236	96.7

to help students when needed (10-h, 99.1 %; 20-h, 98.8 %). Third, as shown in Table 3, many workers perceived that the program promoted the development of students, including their social competence (10-h, 93.7 %; 20-h, 96.4 %), bonding (10-h, 91.7 %; 20-h, 94.0 %), and overall development (10-h, 94.2 %; 20-h, 96.8 %). Fourth, over 90 % of the workers would recommend the program to students with similar needs (10-h, 90.7 %; 20-h, 92.7 %). Lastly, over 80 % of the workers expressed that they would teach similar courses again in the future and indicated that the program had helped their professional development (Table 4).

Table 3 Perceived effectiveness of the program by the program implementers

The extent to which the Tier 1 Program (i.e., the program in which all students have joined) has helped your students	Participants with positive responses (options 3–5)			
	10-h		20-h	
	N	%	N	%
1. It has strengthened students' bonding with teachers, classmates and their families	171	91.7	234	94.0
2. It has strengthened students' resilience in adverse conditions	385	86.3	228	91.6
3. It has enhanced students' social competence	417	93.7	240	96.4
4. It has improved students' ability in handling and expressing emotions	399	89.9	238	96.0
5. It has enhanced students' cognitive competence	393	88.3	219	88.0
6. Students' ability to resist harmful influences has been improved	375	84.1	229	92.0
7. It has strengthened students' ability to distinguish between the good and the bad	404	90.6	234	94.0
8. It has increased students' competence in making sensible and wise choices	389	87.2	230	92.4
9. It has helped students to have life reflections	365	82.0	221	89.1
10. It has reinforced students' self-confidence	361	80.9	212	85.5
11. It has increased students' self-awareness	417	93.7	242	97.2
12. It has helped students to face the future with a positive attitude	374	84.0	222	89.2
13. It has helped students to cultivate compassion and care about others	381	85.6	231	92.8
14. It has encouraged students to care about the community	333	74.8	211	84.7
15. It has promoted students' sense of responsibility in serving the society	345	77.5	207	83.1
16. It has enriched the overall development of the students	419	94.2	241	96.8

Reliability analyses showed that Form B was internally consistent (Table 5): 10 items related to the program ($\alpha = .93$), 10 items related to the implementer ($\alpha = .91$), 16 items related to the benefits ($\alpha = .96$), and the overall 36 items measuring program effectiveness ($\alpha = .97$). Results of correlation analyses showed that both program content ($r = .71$, $p < .01$) and program implementers ($r = .51$, $p < .01$) were associated with program effectiveness (Table 6).

To examine the differences in the perceived variables (i.e., program content, program implementers, and program effectiveness) across dosage levels, a series of independent *t*-test was performed with the perceived variables as dependent variables and dosage level (i.e., 10 and 20-h) as independent variable. Significant results were found in all program outcomes, except for the perceived qualities of the program implementers ($t(1,354) = -.09$, $p > .01$). In general, regardless of all program components, participants from the 20-h program reported higher scores than did their counterpart from the 10-h program (Table 5).

Table 7 presents multiple regression analysis results using the mean score of all program effectiveness items (i.e., items 21–36). Higher positive views toward the program and program implementers were associated with higher program effectiveness ($p < .01$). Further analyses showed that perceived program content ($\beta = .63$) was a

Table 4 Other aspects of subjective outcome evaluation based on the views of the program implementers

If you have a student/client whose needs and conditions are similar to those of your students who have joined the program, will you suggest him/her to participate in this program?

Participants with positive responses (options 3–4)			
10-h		20-h	
N	%	N	%
401	90.7	229	92.7

Note: The item is on a 4-point Likert scale with 1=definitely will not teach, 2=will not teach, 3=will teach, and 4=definitely will teach

If there is a chance, will you teach similar programs again in the future?

Participants with positive responses (options 3–4)			
10-h		20-h	
N	%	N	%
363	82.7	209	85.3

Note: The item is on a 4-point Likert scale with 1=definitely will not teach, 2=will not teach, 3=will teach, and 4=definitely will teach

Do you think the implementation of the program has helped you in your professional growth (e.g., enhancement of your skills)?

Participants with positive responses (options 3–5)			
10-h		20-h	
N	%	N	%
352	80.4	214	87.0

Note: All items are on a 5-point Likert scale with 1=unhelpful, 2=not very helpful, 3=slightly helpful, 4=helpful, and 5=very helpful

Table 5 Descriptive statistics, internal consistency, and independent *t*-test among the variables

	Total ($N=1{,}403$)	10-h ($n=920$)	20-h ($n=483$)		
	M (SD)	M (SD)	M (SD)	α (Mean)[a]	$t_{(df)}$
Content	4.35 (.70)	4.32 (.70)	4.40 (.69)	.93 (.56)	$-2.10^{*}{}_{(1,365)}$
Implementers	4.62 (.55)	4.62 (.54)	4.62 (.56)	.91 (.51)	$-.09_{(1,354)}$
Effectiveness	3.32 (.62)	3.28 (.61)	3.40 (.62)	.96 (.61)	$-3.45^{**}{}_{(1,370)}$
Total	3.97 (.54)	3.94 (.54)	4.02 (.54)	.97 (.44)	$-2.27^{*}{}_{(1,300)}$

$**p<.01, * p<.05$
[a]Mean inter-item correlations

Table 6 Correlations among variables

	1	2	3
1. *Content*	–		
2. *Implementers*	.63	–	
3. *Effectiveness*	.71	.51	–

All correlation coefficients are significant ($p<.01$)

Table 7 Multiple regression analyses predicting program effectiveness

	Predictors		Model	
	Program content	Program implementers		
	β^a	β^a	R	R^2
10-h	.66**	.10**	.73	.53
20-h	.57**	.16**	.68	.46
Overall	.63**	.11**	.71	.50

**p<.01

[a]Standardized coefficients

Table 8 Summary of goodness of fit for the hypothesized 3-factor CFA model

Model	Description	χ^2	df	CFI	NNFI	SRMR	RMSEA (90 % CI)
1	3-factor	5063.55**	606	.97	.97	.06	.08 (.08–.08)

Note: *CFA* confirmatory factor analysis, χ^2 chi-square goodness-of-fit test, *GFI* goodness-of-fit index, *NNFI* Bentler-Bonett nonnormed fit index, *RMSEA* root-mean-square error of approximation, *SRMR* standardized root-mean-square residual, *CI* confidence interval
**p<.01

significantly stronger predictor than program implementers (β=.11). This model explained 50 % of the variance toward the prediction of program effectiveness. Interestingly, the above relationships and the amount of variance explained were consistent across dosage levels.

To explore the internal structure of the Subjective Outcome Evaluation Form (Form B), confirmatory factor analysis was performed. To evaluate the model fit, several fit statistics were used, such as chi-square goodness-of-fit test (χ^2), comparative fit index (CFI), nonnormed fit index (NNFI), standardized root-mean-square residual (SRMR), and root-mean-square error of approximation (RMSEA). For CFI and NNFI, there is a general agreement that the values of .95 or greater indicate a satisfactory fit to the data (Kline, 2005; Schumacker & Lomax, 2004). The values of both SRMR and RMSEA below .08 and .06, respectively, represent acceptable model-data fit (Hu & Bentler, 1999). Given the assumption of normality was supported (Curran, West, & Finch, 1996; Finney & DiStefano, 2006), maximum likelihood estimation (ML) was used via LISREL 8.80. The hypothesized 3-factor model (i.e., program content, program implementers, and program effectiveness) was supported as reflected by the adequate fit to the data ($\chi^2_{(606)}$=5063.55, p<.01, CFI=.97, NNFI=.97, RMSEA=.08, SRMR=.06, Table 8). All factor loadings were statically significant (t>1.95, p<.05) ranging from .61 to .90 (Table 9).

Discussion

The present study examined the perceptions of a positive youth development program from the program implementers' perspective. It investigated whether the relations among program content, program implementers, and perceived program

Table 9 Completely standardized factor loadings and standardized errors for the 3-factor model

	Factor loading	Error
Content		
1. The objectives of the curriculum are very clear[a]	.66	.57
2. The design of the curriculum is very good	.78	.39
3. The activities were carefully planned	.72	.48
4. The classroom atmosphere was very pleasant	.75	.43
5. There was much peer interaction among the students	.65	.58
6. Students participated actively during lessons (including discussions, sharing, games, etc.)	.72	.48
7. The program has a strong and sound theoretical support	.63	.60
8. The teaching experience I encountered enhanced my interest in the course	.80	.36
9. Overall speaking, I have very positive evaluation of the program	.90	.20
10. On the whole, students like this curriculum very much	.87	.25
Implementers		
11. I have a good mastery of the curriculum[a]	.73	.47
12. I prepared well for the lessons	.75	.44
13. My teaching skills were good	.78	.40
14. I have good professional attitudes	.80	.35
15. I was very involved	.81	.34
16. I gained a lot during the course of instruction	.64	.59
17. I cared for the students	.64	.59
18. I was ready to offer help to students when needed	.59	.65
19. I had much interaction with the students	.61	.62
20. Overall speaking, I have very positive evaluation of myself as an instructor	.80	.37
Effectiveness		
21. It has strengthened students' bonding with teachers, classmates and their families[a]	.76	.42
22. It has strengthened students' resilience in adverse conditions	.78	.38
23. It has enhanced students' social competence	.79	.37
24. It has improved students' ability in handling and expressing emotions	.80	.37
25. It has enhanced students' cognitive competence	.76	.43
26. Students' ability to resist harmful influences has been improved	.79	.38
27. It has strengthened students' ability to distinguish between the good and the bad	.82	.33
28. It has increased students' competence in making sensible and wise choices	.80	.36
29. It has helped students to have life reflections	.72	.48
30. It has reinforced students' self-confidence	.77	.41
31. It has increased students' self-awareness	.77	.41
32. It has helped students to face the future with a positive attitude	.79	.38
33. It has helped students to cultivate compassion and care about others	.79	.37
34. It has encouraged students to care about the community	.77	.41
35. It has promoted students' sense of responsibility in serving the society	.78	.40
36. It has enriched the overall development of the students	.86	.27

Note: Factor loading = completely standardized factor loadings; Error = standardized errors
[a]Item was fixed to a value of 1.0

effectiveness differ by program dosage levels. It studied the predictive role of perceived program and implementer quality in perceived benefits of the program. Finally, it also examined the psychometric properties of the Subjective Outcome Evaluation Scale (Form B), including its internal consistency and factorial structure via confirmatory factor analysis.

Results of the study revealed that a high proportion of program implementers perceived the program positively, in terms of program content, their involvement in the implementation process, and program effectiveness. Such findings are in line with prior results (Shek & Ma, 2012; Shek et al., 2011; Shek & Ma, 2008; Shek & Ng, 2011; Shek, Sun, & Lung, 2008) and findings based on different quantitative and qualitative methods, such as objective outcome evaluation, subjective outcome evaluation collected from the program participants' perspective, process evaluation, focus group interview, and interim evaluation (Shek, 2010; Shek & Ng, 2009; Shek & Sun, 2009a, 2009b, 2010; Shek, Sun, & Kan, 2009; Shek, Sun, & Siu, 2008; Siu & Shek, 2010) .

Consistent with previous findings (Shek & Ma, 2012; Shek et al., 2011; Shek & Ma, 2008; Shek & Ng, 2011; Shek, Sun, & Siu, 2008), the two program factors (i.e., program content and program implementers) were significantly related to the perceived program effectiveness. Results from the regression analysis suggested that program content is a stronger predictor of program effectiveness as compared to program implementers. These findings highlighted the role of these two factors when assessing the program effectiveness of a positive youth development program in Chinese contexts.

Another purpose of this study is to test the effects of dosage on the relationship between program implementation and observed outcomes. Participants in 20-h programs reported higher subjective outcome evaluation scores than did their counterparts from the 10-h programs, in terms of program content and perceived program effectiveness. This is consistent with the common findings that programs with higher dosage would be more beneficial than programs with lower dosage (Chinman et al., 2008; Durlak & DuPre, 2008; Wilson et al., 2009). When comparing the results based on the nine datasets (Shek & Ma, 2012), the strength of the relationship between the program content and program effectiveness was similar in this study. However, such effects were present in the perceived qualities of the program implementers, regardless of the program dosage levels. The present findings clearly indicate the importance of investigating different aspects of the program implementation in the field of program evaluation research.

Interestingly, the aforementioned relationships did not vary by program dosage levels. Compared to the perceived qualities of program implementer, the variance of program content in predicting the perceived program effectiveness was higher. One possible explanation for this phenomena may be related to the highest mean score of perceived qualities of implementers ($M = 4.62$, $SD = .55$) as compared to the other factors (perceived qualities of program content, $M = 4.35$, $SD = .70$; perceived program effectiveness, $M = 3.32$, $SD = .62$) (Table 5). These results were consistent across different program modes. Previous study demonstrated that this ceiling effect might be a plausible source of nonsignificant result (Pind, Gunnarsdóttir, & Jóhannesson, 2003). Future study should be conducted to explore whether other

factors (e.g., relationships with program participants, degree of involvement of the program) would influence such relationships. Durlak and DuPre (2008) highlighted the importance of examining the relative influence of different program factors when assessing program effectiveness. Clearly, our findings attempt to fill this research gap. It is noteworthy that we only examined one feature of the dosage – the total amount of hours in this study. To better understand how and under what conditions a program works effectively, future research should test other features of dosage (e.g., intensity, duration) regarding the influences of program elements.

One of the purposes of the present study is to examine the factor structure of the 36-item Subjective Outcome Evaluation Form. Results from factor analysis support the multidimensional nature of the measure of program effectiveness (Gottfredson & Gottfredson, 2002). It also showed that Form B is a valid and reliable assessment tool. The paucity of psychometrically sound instrument might hinder the development of positive youth development program (Catalano, Gavin, & Markham, 2010). Our findings can be viewed as a positive response to this research gap. It is our hope that this tool would facilitate the dissemination of the effective positive youth development program in the future.

There are several limitations in the present study. As the findings in the study are self-reported in nature, other methods such as focus group interviews, diaries, and process evaluation should also be used to triangulate the findings of the present findings. Also, a multilevel ecological approach should be adopted to understand how different contextual factors interact with each other and how they contribute to the effectiveness of the program. Prior studies showed that different ecological factors have varying influences on the program outcomes (Elliott & Mihalic, 2004; Weissberg & O'Brien, 2004). Future studies could benefit the field by examining the effects of program content and perceived qualities of program implementers with other individual (e.g., gender, social-economic status) and organizational characteristics (e.g., class size, level of support). With the inclusion of other program factors, it was expected that the amount of variance explained in perceived program effectiveness in the present study would be improved.

Despite the above limitations, findings from this study further underscore the necessity of examining program effectiveness in non-Western contexts, which is rare in the field of program evaluation. It extends the literature by demonstrating the association of positive perceptions on the program and program effectiveness. Our findings also provide insights to practitioners when designing and implementing adolescent program in the Chinese context.

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Subjective Outcome Evaluation of the Project P.A.T.H.S.: Secondary Analyses of the Qualitative Data Collected from Program Implementers

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Introduction

Adolescence is a transitional stage from childhood to adulthood, which is accompanied by both risks and developmental opportunities (Roth & Brooks-Gunn, 2003). In the past decade, we witnessed a remarkable rise in youth research and intervention (Steinberg & Morris, 2001), with focus placed on investigating "how things go wrong than how they go right" during the development process of adolescents (Larson, 2000, p. 170). Similarly, traditional youth intervention programs mainly attempted to prevent adolescents from adopting certain problem behaviors, such as substance abuse, delinquency, and sexual behavior, instead of promoting their overall development (Catalano, Hawkins, Berglund, Pollard, & Arthur, 2002). With criticisms on the previous practice of youth development programs accumulating, there is a growing consensus that such programs should lead to building competencies among adolescents, which could serve not only as protective factors against risk behaviors but as the foundation of positive youth development (Eccles & Gootman, 2002; Greenberg et al., 2003). While many positive youth development programs have emerged which called for a paradigm shift in the West, little effort has been made to change the paradigm in the Chinese context. Against such a background, the Project "P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme" was launched in Hong Kong to promote adolescent holistic development (Shek & Sun, 2012b).

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The Project P.A.T.H.S. is a large-scale multiyear positive youth development program implemented in secondary schools in Hong Kong. The project is composed of two tiers: the Tier 1 Program is a universal program with all Secondary 1 to Secondary 3 students as the participants, whereas the Tier 2 Program is a selective program targeting adolescents who have greater psychosocial needs. In the Tier 1 Program, the project developers designed a set of curricula tailored for students at each grade of junior secondary school, based on 15 critical positive youth development constructs that were extracted from successfully implemented youth programs (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004).

Systematic documentation and evaluation are hallmarks of the Project P.A.T.H.S. in Hong Kong. To guarantee the credibility of the results, a triangulation strategy was applied in evaluating the effectiveness of the project (Shek, 2008a; Shek & Sun, 2012a). Both quantitative approaches and qualitative strategies were employed in the evaluation, including objective outcome evaluation, subjective outcome evaluation, qualitative evaluation based on focus groups, student diaries, and in-depth interviews. Findings obtained through different evaluation methods consistently showed that the Project P.A.T.H.S. was delivered successfully and perceived positively by the participants, implementers, and other observers (e.g., Law & Shek, 2012; Shek & Ma, 2012; Shek & Sun, 2012b; Shek & Yu, 2012).

Subjective outcome evaluation, also known as client satisfaction survey, is commonly used in program evaluation to capture the viewpoints of program participants in terms of program format, implementation, impacts, and other related aspects (Shek & Sun, 2007b). It is noteworthy that the traditional approach of subjective outcome evaluation that merely cares about feedbacks of participants largely neglects the important role of implementers in appraising program effectiveness (Shek & Sun, 2007a). However, there are several concerns of including project staff in evaluation. First, as evaluation is a scientific query that requires relevant knowledge and skills, program implementers may simply lack such knowledge and skills. Second, the dual roles as both implementer and evaluator may result in role strain and confusion of the implementers. Finally, it is possible that implementers will make unfair judgment of the program effectiveness, driven by personal needs and intent that are rooted in their responsibilities in program implementation (Shek, 2008c). Despite these cautions, it was argued that the absence of views on program evaluation from implementers, who are a key group of program stakeholders, would bring loss to the validity, richness, and utilization of evaluation results (Brandon, 1998; Butterfoss, Francisco, & Capwell, 2001).

As such, subjective outcome evaluation was conducted to collect not only feedbacks of the program participants but also perceptions of the implementers in the Project P.A.T.H.S. There are several merits of engaging implementers in the program evaluation. First, views of the instructors (i.e., teachers and social workers who implemented the program) could contribute to a more comprehensive picture depicting how the program was delivered and received, which would help to reduce the biases of participants toward the program. As frontline staff, implementers have experiences that are particularly important for judging the smoothness of delivery process, participation of students, and feasibility of program design.

Compared with cases in which beneficiaries are the only source of data, validity of evaluation would be improved when implementers are also involved and their expertise in program operation is tapped (Brandon, 1998).

Second, as implementers are most familiar with the whole process of program implementation, their knowledge about curriculum delivery, participants' responses, classroom and school settings, and problems encountered could help deepen stakeholders' understanding of the evaluation findings, thus generating valuable references for improving the program in the future (Brandon, 1999; Segone, 2010).

Third, according to the utilization-focused evaluation paradigm, meaningful participation of stakeholders in program evaluation leads to a better utilization of the evaluation results (Patton, 2008). Regarding the present case, engaging in evaluation can provide implementers with opportunities for reflecting on their performance, learning about the feedbacks of participants, and identifying aspects to be amended. Thus, the evaluation results could be directly utilized by the implementers to improve their future work, which would contribute to a higher quality of program delivery. All in all, as stipulated in the evaluation standards of the Joint Committee on Standards for Educational Evaluation (1994), involvement of implementers who are the key stakeholders of the program can improve the quality of evaluation rather than the contrary.

In the Project P.A.T.H.S., based on the responses of program participants and implementers in the subjective outcome evaluation exercises, the implementers in each school were requested to produce a report documenting the effectiveness of the program by summarizing the perceptions of the students and themselves. Each report contained five short conclusions that the responsible implementers arrived at, in which the most important findings of the subjective outcome evaluation were highlighted. These conclusions, serving as secondary data, constituted the primary database of the present study. According to Royse (2008), secondary data analysis "involves analysis of an existing data set that results in knowledge, interpretations, and conclusions beyond those stated in the original study" (p. 244), which is primarily employed to investigate new or additional research questions or to verify the findings of previous research (Heaton, 2008). Although suspicions exist, secondary data analysis has been widely accepted as a credible mode of inquiry in social science research. Compared to studies using original data, there are several advantages of secondary data analysis. First, due to the relative convenience in accessing and processing secondary data, this approach is cost effective in terms of time, money, and effort. Second, through promoting the reexamination and rethinking of the data, secondary analysis can maximize the utilization of data and facilitate knowledge generation. Third, after a round of data processing, confidentiality of the information related to the original data source is usually not a problem in secondary data analysis. Fourth, secondary analysts have the opportunity to view the data with detachment, thus suffering less from being too close to the data source, which might be difficult to achieve by the original researchers (Gleit & Graham, 1989; Herron, 1989; Szabo & Strang, 1997). Apart from the above merits that are commonly shared by different secondary analyses, the conclusions drawn by the implementers of the Project P.A.T.H.S. can also serve as a lens for the program developers and

investigators to concentrate on the most significant points of the subjective outcome evaluation results.

There have been several studies examining the "five conclusions" to evaluate the effectiveness of the Tier 1 Program at different levels (e.g., Shek, 2008c; Shek & Sun, 2010a). Based on the 1,327 school-based program reports submitted by program implementers for nine datasets, 14,390 meaningful units were extracted from 6,618 conclusions (Shek, 2012). Further analyses showed that most of the conclusions were positive in nature reflecting three major themes: different stakeholders had positive views regarding the program, the program implementers were seen in a favorable light, and most stakeholders felt the program was beneficial to the holistic development of the students. On the other hand, around 18 % of the responses were related to the difficulties in implementation and recommendations for improvement.

Although the findings of Shek (2012) give a comprehensive picture about the effectiveness of the program based on the "five conclusions" in the reports, the qualitative data were transformed to quantitative data represented by percentages. As such, it would be helpful to explore the conclusions in depth using narrative analysis. Narrative analysis is a common strategy of qualitative research used to learn and understand the ways people experience the world through their story-telling (Connelly & Clandinin, 1990). When applied to evaluation studies, narrative analysis offers us experiential insights and contextual meanings by connecting researchers to the stories of program staff and participants about their contextualized lived experiences (Costantino & Greene, 2003). The advantages of qualitative data in describing the process of program delivery, capturing the image of implementation contexts, and understanding stakeholders' subjective experiences have been extensively recognized in evaluation research (Spencer, Ritchie, Lewis, & Dillon, 2003). Posavac (2011) also mentioned that "qualitative information helps us to interpret quantitative information and to recognize the unique aspects of different program settings" (p. 147). In the present study, although the conclusions are secondary in nature and do not tell full stories, they allow us to listen to the real voices of the implementers and participants about their perceptions and feelings toward the program, which provides a unique way of investigating how well the program was implemented.

Methods

Starting from 2005/2006 school year when the Project P.A.T.H.S. was launched, student participants and implementers were invited to respond to two subjective outcome evaluation forms (Form A and Form B, respectively), after completion of the Tier 1 Program in each year. Based on these evaluation data, the program implementers then prepared a report summarizing the effectiveness of the program. The data collection was conducted throughout the Experimental Implementation Phase and Full Implementation Phase of the project. By 2008/2009 school year, there had

been a total of 1,327 reports (Secondary 1: 669; Secondary 2: 443; Secondary 3: 215) collected from 244 schools, with 223,101 students and 9,915 program implementers involved. Form A is composed of ten parts, specifically including:

1. Participants' perceptions of the program, such as program objectives, design, classroom atmosphere, interaction among the students, and the respondents' participation during class (ten items)
2. Participants' perceptions of the implementers, such as preparation, professional attitude, involvement, and interaction with the students (ten items)
3. Participants' perceptions of the effectiveness of the program, such as promotion of different psychosocial competencies, resilience, and overall personal development (16 items)
4. The extent to which the participants would recommend the program to other people with similar needs (one item)
5. The extent to which the participants would join similar programs in future (one item);
6. Overall satisfaction with the program (one item)
7. Things that the participants learned from the program (open-ended question)
8. Things that the participants appreciated most (open-ended question)
9. Opinion about the implementers (open-ended question)
10. Areas that require improvement (open-ended question)

Similar to Form A, Form B includes the evaluation of the following:

1. Program implementers' perceptions of the program, such as program objectives, design, classroom atmosphere, interaction among the students, and the students' participation during class (ten items)
2. Program implementers' perceptions of their own practice, including their understanding of the course, teaching skills, professional attitude, involvement, and interaction with the students (ten items)
3. Program implementers' perceptions of the effectiveness of the program, such as promotion of different psychosocial competencies, resilience, and overall personal development of the students (16 items)
4. The extent to which the implementers would recommend the program to other students with similar needs (one item)
5. The extent to which the implementers would teach similar programs in future (one item)
6. Overall satisfaction with the program (one item)
7. Things that the implementers obtained from the program (open-ended question)
8. Things that the implementers appreciated most (open-ended question)
9. Difficulties encountered (open-ended question)
10. Areas that require improvement (open-ended question)

Based on the subjective outcome evaluation data collected via Form A and Form B, including both quantitative and qualitative data, implementers in each school were requested to complete a Tier 1 Program evaluation report. In the last part of the report, the implementers were invited to give five conclusions of the program with

respect to its outcomes and effectiveness. These conclusions regarding the programs implemented at different grades of the participating secondary schools from 2005/2006 to 2008/2009 academic years constituted the database of the study by Shek (2012) and the present study.

All data generated from the "five conclusions" were analyzed by trained research colleagues who had good mastery of both quantitative and qualitative analysis skills. For the data of each cohort, there were two research assistants with social work or psychology background conducting the analyses and one more colleague involved in cross-checking the final coding and categorization. Intra- and inter-rater reliabilities of the data coding were calculated to guard against the influences of ideological biases and preoccupations of the coders, details of which had been introduced by Shek (2012). Moreover, the principles of qualitative analyses proposed by Shek, Tang, and Han (2005) were also applied as the reference for the data analyses in the present study.

Results

As reported in the previous study by Shek (2012), conclusions made by the implementers in their reports mainly clustered around five aspects: views regarding the program, perceptions toward the program implementers, effectiveness of the program, difficulties encountered in the implementation process, and recommendations for improvement. As far as the rough proportions of these five categories of conclusion in all responses are concerned, comments related to the program, implementers, and program effectiveness represented the overwhelming majority, while the highlighted difficulties and recommendations accounted for a small part. In alignment with the categorization, findings of the present study are presented accordingly in the following part.

Views Regarding the Program

Overall speaking, over four-fifths of the responses regarding the program were positive in nature (Shek, 2012). Both "instructors and students valued the Tier 1 Program highly," which "had a positive impact on them and was much helpful." It was frequently stressed in the conclusions that most of the students "liked the curriculum very much." In a conclusion, the implementer wrote that "most students were satisfied with this program (87.4 %), and they also mentioned that they will join similar programs in future." Besides, positive perceptions toward the program seemed to be particularly popular among students at higher grades, according to the implementers' estimations in terms of the percentages of students who were satisfied with the program at different levels. Holding a positive view was likewise common among the instructors, who normally considered the program satisfactory

and a "good channel to instill positive values to students," and that the program "increased their knowledge about the students." To be more specific, feedbacks from both students and implementers suggested that the program was well designed. They appreciated "the use of interactive and gaming methods, which made a strong impression on them." Besides, "the contents of the program were designed with thoughts. For instance, the design of games and the PowerPoint materials" had "enriched the curriculum" and brought "lots of positive encouragement to the students." Agreement was also reached on the "clear objectives," strong "theoretical basis," and good concepts and values of the program. For example, it was commented that "overall, each intervening dimension was based on theoretical research, which helped the teachers to implement the curriculum," and that "students appreciated the serving principle of 'positive discipline'." On the whole, in spite of the varying degrees of satisfaction with the program, the perceptions of the instructors and students regarding the Tier 1 Program were quite positive in nature.

Perceptions Toward the Program Implementers

Almost all conclusions about the program implementers were positive. As estimated by the reporting implementers, as high as "over 90 % of the students were satisfied with the instructors' performance." Students "thought that the excellent performance of the teachers was the most worthy of praise as it led them to be very engaged in discussions." The aspects that students appreciated the most included instructors' attitude, preparation for teaching, and care for students. Specifically, the "friendly, cordial and patient attitude of the teachers was most respected by the students, which aided in the development of teacher-student relationship and consequently engaged students in the learning." It was also mentioned that the "frank sharing of the teachers was the key to success" in the curriculum delivery, and "the dedication of the teachers indeed made a positive impact on students' participation." Besides, a considerable number of conclusions suggested that students appreciated the instructors' preparation for the lectures, which enabled the instructors to "effectively bring out information that was relevant to the program" and "master the curriculum content, allowing students to learn in a relaxed atmosphere and environment." Implementers' care for students was another highlight of many conclusions. Comments reflected that "the teachers were willing to offer help when students were in need," and they could "understand students' learning" and "feelings" well. At the same time, the implementers themselves were also "pleased with their professional attitude and class arrangement." They said that "they were able to keep in line with the program objectives, which allowed them to make the most of the activities and stimulate students' overall development." To sum up, the narratives suggested that the program implementers had successfully fulfilled their tasks, which had been well recognized by the students and themselves.

Effectiveness of the Program

As reflected evidently in the overwhelming majority of the conclusions, students and instructors at all levels had benefited a lot from the program, suggesting that the program was effective at each level. Both "students and instructors thought that the program helped in promoting students' abilities in all aspects." First, "how to communicate and interact with others" was "the most important thing students learned from the curriculum." Through "interactive learning," the program helped to "enhance the relationship between the classmates and between the students and teachers." The strengthened "interpersonal skills and attitude" as well as "self-confidence" could at the same time facilitate students in building positive relationships with other people. Second, intrapersonal competencies of the students such as "self-understanding," "self-judgment," and "self-identity" were promoted significantly. Students thought that the "reflective sessions of the curriculum" were "helpful for their development, particularly in increasing self-awareness and self-confidence, and strengthening their positive values." Third, it was noted in many conclusions that "most students thought that this program could enhance their ability to differentiate between the right and wrong, which could help them to face the challenges in life." Accordingly, their ability of "resisting the detrimental influences" was also increased. In summary, there was a consensus among the absolute majority of the participants and implementers that the Tier 1 Program effectively promoted the "positive development" of the adolescents "in different aspects and levels." As concluded in a report, "the program actively promoted the whole-person development of the participants. Although it might not necessarily come to use immediately during learning, most students believed that the knowledge and learning experience gained in the class will be definitely useful in future." In addition to the benefits to students, a portion of program implementers disclosed that the program was useful to them at the same time, helping them to "analyze students' problems from different perspectives" and promoting the "teamwork among the teachers."

Difficulties in the Implementation Process

While most comments were positive remarks about the program, there was a small portion related to the difficulties encountered by the implementers during the implementation process. The most prominent difficulty was time management. It was reported that "due to insufficient time, teachers could not fully bring out the lesson content and the time for sharing was limited," which hindered students' "engagement in class" and "comprehension of what they had learned." Some others pointed out that "there were too many course materials for each lecture; it was thus hard to choose. Moreover, as discussions needed a lot of time, teachers had to be rushed sometimes, which might affect the learning outcomes of students." Another repeatedly mentioned difficulty was classroom control. Because of variations in students' levels of discipline, "learning ability," "attitude," and "attention" to the lectures, "the instructors

found it difficult to balance the 'disciplining' and 'counseling' works in class" and effectively engage students in the learning and activities. As highlighted in a conclusion, "many students used to avoid thinking and writing. Therefore, they tended to write 'nil' or give answers that did not require much thinking or writing when responding to open-ended questions." Besides, "the teachers sometimes felt that they lacked enough personal experience to share, and thus students could not fully engage in class or raise their recognition of the lecture topics." Difficulties faced by the instructors also arose from the heavy workload in preparing for and delivering the curriculum (e.g., "large class size," "too much content," "extended class hours") and in some cases from the pressure related to school administration (e.g., "forced appointment of the teachers," "incompatibility with school curriculum schedule," "lack of support"). Other problems highlighted by the implementers related to the applicability of the program content to students' needs and abilities and the classroom settings.

Recommendations for the Program Improvement

In addition to the abovementioned themes, there was a cluster of conclusions concerning the recommendations provided by the program implementers. The most popular recommendation among them was to "make the program more interesting." It was suggested that "more activities can be added to the class, which will not only strengthen students' interaction, but allow them to learn in a relaxing and happy environment, thus enhancing their learning motivation." Specifically, "more diversified teaching formats" could be adopted, such as "games," "discussions," and "outdoor activities"; more multimedia technologies could be applied to assist with teaching, such as "videos, slides, and voice clips." Recommendations were also provided in terms of time arrangement of the course. It was thought that a better "match between content and time frame" would help the instructors to "offer more in-depth teaching" and allow students to "have more discussion and sharing," so that "the wonderful course would not be wasted due to time constraints." Another common concern of the recommendations was about adjusting and updating the course content to better accommodate the "needs," "interests," and abilities of different students and "allow them to apply what they have learned in daily lives." For example, as students mature, "topics that they care about" and "thought-provoking topics such as meaning of life" can be deepened in the curriculum; "real-life examples and news" can be provided to facilitate students' understanding.

Discussion

Using the conclusions drawn by the program implementers based on their analyses of the subjective outcome evaluation forms completed by the participants and implementers, this chapter depicts the general perception of them regarding the

effectiveness of the Tier 1 Program of the Project P.A.T.H.S. across Secondary 1 to Secondary 3 levels. It was shown that the majority of the conclusions described the program as positive in its overall design, implementation, and effectiveness in enhancing students' holistic development. Both the participants and implementers liked the program and were satisfied with the performance of the implementers. The well-designed content and interactive teaching methods benefited students significantly in terms of multiple aspects of positive youth development competencies (e.g., interpersonal skills, self-understanding, resilience). These evaluation findings align with the earlier ones that were based on specific data subsets of the "five conclusions" (e.g., Shek, 2008b; Shek & Sun, 2010b). The qualitative information presented in this chapter can also serve as an in-depth elaboration of the quantitative findings by Shek (2012) based on the same database. In addition, the present findings echo the previous ones yielded by different forms of evaluation such as objective outcome evaluation (e.g., Shek & Ma, 2012), process evaluation (e.g., Law & Shek, 2012), interim evaluation (e.g., Shek & Yu, 2012), and qualitative evaluation based on focus groups, student diaries, and in-depth interviews (e.g., Shek & Chan, 2010; Shek & Sun, 2009, 2012a).

In addition to the positive comments on the program which constituted the main body of the conclusions, difficulties in the implementation process were highlighted in a small part of them. The major problems experienced by the program implementers were basically related to time management, classroom discipline, and heavy workload. As the relevant issues had been addressed in the training provided to the instructors prior to the program delivery, several reasons that may explain these problems should be considered. First, the emphasis on interactive and reflective teaching of the project might pose a challenge to the Chinese teachers who typically adopted a "didactic and teacher-centered" education style (Nield, 2004). Under the traditional approach, a teacher's job in class is normally to teach and set rules, and students are expected to listen and follow rules. Thus, it might be difficult for the instructors, who expected an orderly classroom environment, to engage students through intensive interactions such as games, discussions, and self-disclosure that were required by the program. As commented in a conclusion, "the instructors found it difficult to balance the 'disciplining' and 'counseling' works in class," which constituted one of the major obstacles to the instructors in maintaining classroom discipline. The lack of experiences of dealing with such tasks could also bring the implementers difficulties in class time management and perceived increased workload in preparation and teaching. Second, apart from the instructors, the students who were traditionally educated to be submissive and quiet in class might come across difficulties as well when they were requested to perform actively in class activities (Wong, 2004). The passiveness of students in experiential and reflective learning could also explain in part the troubles faced by the implementers in classroom management. Another factor to be considered is the addition of the workload brought by the project upon the instructors, given the heavy duties (e.g., teaching, guidance, management of class matters) they had been occupied with already, especially in consideration of the ongoing education reform in Hong Kong. The teachers might perceive pressures due to the extra work caused by participating

in the project, which could be increased if their schools failed to provide effective support. There were also some recommendations provided by the program implementers, in which more diversified formats, better time arrangement, and timely update of the curriculum were suggested. In conjuncture with the highlighted difficulties in the implementation process, these suggestions provide useful references for further improvement of the program.

The importance of involving implementers in program evaluation is underscored in the present findings. First, inclusion of the assessment by implementers, who have the most knowledge about the program implementation, could balance the possible biases of program beneficiaries in judging the quality of the program, hence increasing the credibility of evaluation results. While the students gave crucial comments on the perceived effectiveness of the program in promoting their own development, the implementers were able to make an independent evaluation from a general and professional perspective. As noted by Shek (2012), there is a tendency to treat teachers as the internal evaluators who carry out authentic assessment. Second, implementers could provide informative recommendations based on their expertise, which can be directly utilized for future revisions of the program. As maintained by Hendricks and Papagiannis (1990), "recommendations are one of the most critical products of any evaluation" (p. 121). Besides, the implementers themselves could gain experiences that help improve their future performance through participating in the evaluation. These are in line with the points of the utilization-focused evaluation in which the maximized utility of evaluation findings is particularly stressed (Patton, 2008). Third, according to the empowerment evaluation rationale, participation in the decision-making process could give the evaluators a sense of self-determination, which will empower them to become more committed to the decisions (Smith, 1998). In a word, the merits of including implementers in addition to participants in program evaluation are evident. As pointed out by Brandon (1999), since "program faculty and staff know more than external evaluators about program history, administration, management, and daily operations" and "program beneficiaries know about aspects of program implementation or outcomes that neither evaluators nor program personnel know" (p. 364), it is a worthwhile attempt to combine the views from both groups when evaluating a program.

The present evaluation study also featured secondary data analysis based on the conclusions drawn by the implementers. As demonstrated in the study, it is an optimum option when attempting to get a quick overview of how the implementers and participants subjectively appraised and felt about the program. By means of the observation and summary of the implementers, the most important feedbacks given by the participants and implementers in the subjective outcome evaluation were located efficiently. The information conveyed by the narratives not only produces further evidence for the success of the Project P.A.T.H.S. as consistently shown in other evaluations but provides unique insights for understanding the effects, existing problems, as well as room for improvements in the program.

There are some limitations of the present study deserving attention. First, since a narrative approach was adopted, it is hard to capture the exact profile about the distribution of different perceptions of different stakeholders toward the program.

It would be ideal to connect the present findings to the previous quantitative findings for a more comprehensive understanding. Second, due to the nature of secondary data, it is possible that these conclusions cannot reflect the original results of the subjective outcome evaluation very well, if the implementers responsible for the conclusions failed to make neutral and reasonable judgments. This risk can be minimized by providing systematic training to and building effective communication with the implementers and be monitored by comparing the results of secondary data analyses with those based on other evaluation strategies. Third, though the short conclusions provide an efficient access to the viewpoints of the implementers and participants concerning the program, the information carried is too limited to offer a deeper elaboration of the issues highlighted. Similarly, a more thorough picture could be achieved by referring to the findings derived from different data sources and evaluation methods concurrently. Despite the abovementioned limitations, the present study gives further support for the success of the Tier 1 Program of the Project P.A.T.H.S. in Hong Kong.

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Interim Evaluation of Project P.A.T.H.S.: An Integration of Findings Based on Program Implementers

Daniel T.L. Shek and Lu Yu

Introduction

Youth problems such as drug use, school failure, and delinquent behaviors have serious negative consequences for adolescent development and substantial costs to society (Biglan et al., 2004; Loeber & Dishion, 1983). The high short-term and long-term costs related to such problems call for a pressing need for preventive programs in this area. Positive youth development approach has been considered as a promising preventive approach for different adolescent risk behaviors and problems (Benson, 1997). In the past few decades, numerous youth programs have been developed across the world to prevent youth problems by building developmental assets in adolescents and promoting positive youth development in the personal, psychological, social, and spiritual domains (Benson, Mannes, Pittman, & Ferber, 2004; Lerner & Benson, 2003). In contrast, well-designed multiyear youth development programs are grossly lacking in different Chinese contexts (Shek & Yu, 2011a).

The Project "P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme" (the Project P.A.T.H.S.) is probably the biggest positive youth development project in terms of the number of participants and research grant in Asia (Catalano et al., 2012; Shek & Yu, 2011a) that aims at promoting holistic adolescent development in junior secondary school students (Secondary 1 to Secondary 3).

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From 2005 to 2009, with a budget of HK$400 million funded by The Hong Kong Jockey Club Charities Trust, the project was implemented in more than half of all secondary schools in Hong Kong with over 200,000 junior secondary school students participated in the program. Specifically, there are two implementation phases in this project: experimental implementation phase and full implementation phase. For the experimental implementation phase (January 2005 to August 2008), 52 secondary schools were invited to participate in the project with the objectives of accumulating experience in program implementation and familiarizing frontline workers with the program design and philosophy. The full implementation phase started from January 2006 when the programs were implemented on a full scale at Secondary 1 to Secondary 3 (S1–S3) level. Because of the overwhelming positive outcomes of the project, an extension phase with another cycle (2009–2012) was approved by the Trust with an additional earmarked grant of HK$350 million.

The project consists of two tiers of program. The Tier 1 Program targets all students in Secondary 1 to Secondary 3 (i.e., junior secondary school years). Through the use of structured curriculum developed by the research team, students participate in training programs at each grade based on 15 positive youth development constructs identified from the existing successful positive youth development programs (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002). Typically, there are 40 teaching units per grade (each with 30 min of duration) which have been designed based on the theoretical framework of positive youth development constructs, relevant research findings, and existing programs in both local and foreign contexts, among which 20 units (10 hours) are core units and 20 units (10 hours) are elective units. Schools can choose to adopt either the 20-h full curriculum with 40 units or the 10-h core curriculum with 20 units. The Tier 2 Program is designed for around one fifth of students who have greater psychosocial needs in different domains (Shek & Merrick, 2009; Shek & Sun, 2009a).

As far as evaluation is concerned, there is a need for research that focuses not only on the program outcomes but also on the process by which the program creates change in its participants (Allen, Philliber, & Hoggson, 1990). To comprehensively evaluate the effectiveness of the Project P.A.T.H.S., various evaluation strategies have been adopted to collect data from different stakeholders. These include objective outcome evaluation based on students, subjective outcome evaluations based on both program implementers and participants, qualitative evaluations including focus group and case studies based on different stakeholders, management information collected from the Co-Walker Scheme, evaluation based on the repertory grid test, interim evaluation, and process evaluation (Shek, Ma, & Merrick, 2012). While most evaluative methods focus on the outcomes of the program, process evaluation and interim evaluation help researchers understand and monitor the program implementation process in terms of program adherence, effectiveness of different components in the implementation, as well as how changes happen in the participants and program implementers, which provide useful data for improving the current project and for developing new intervention programs in the future (Domitrovich & Greenberg, 2000; Dusenbury, Brannigan, Hansen, Walsh, & Falco, 2005).

In evaluating the Project P.A.T.H.S. in Hong Kong, process evaluation has been conducted through systematic observation on the program implementation details (Law & Shek, 2012). Besides, interim evaluations in several cohorts were also carried out during the program implementation process. Based on program implementers' comments regarding the whole process of program implementation, more understanding of the reactions of the participants and workers to the program could be gained. Besides, interim evaluation can give some indication of whether the program should be changed or not. Via both face-to-face interviews and telephone interviews with the program implementers, interim evaluation information was collected with reference to perceived responses of the participants to the program, experiences of the program workers delivering the program, perceived helpfulness and positive aspects of the program, areas that require improvement, difficulties encountered during program implementation, and overall evaluation of the program.

Several interim evaluation studies on the Project P.A.T.H.S. have been published in the past years. Results showed that both the program implementers and participants had positive comments on the program although the workers also encountered problems and difficulties in the implementation process (Shek, Ma, & Sun, 2008; Shek & Sun, 2006, 2009b). Based on eight datasets on interim evaluation collected from 2006 to 2009, Shek and Yu (2012) reported that most of the participants perceived the program to be beneficial to the holistic development of the students. They also reported that the implementers and participants of the program generally had positive perceptions of the program.

While the above findings on interim evaluation are encouraging, there are several questions requiring further clarification. First, it is unclear whether the program implementation quality would be different for the full curriculum and core curriculum. As different schools face different constraints and problems, it is essential to provide more flexibility for the participating schools to implement the program. Hence, the schools were allowed to adopt either the full curriculum containing 40 units of teaching (20-h training per grade) or the core curriculum with 20 key units (10-h training per grade), taking into account the resources and arrangement available in the respective schools. While high dosage has been consistently identified as a vital factor to program success (Nation et al., 2003; O'connor, Small, & Cooney, 2007), one question that one should ask is whether the full curriculum is better received than the core curriculum by program participants.

Second, research showed that the characteristics of program implementers directly affected the quality of program implementation (Kumpfer & Alvarado, 2003). Shek and Sun (2008) argued that "personal beliefs of program implementers obviously determined their motivation to commit. The skills possessed by colleagues who implement the program are important" (p. 1076). For the Project P.A.T.H.S., the curriculum was taught by two types of program implementers: school teachers and social workers who have different backgrounds in terms of education, working style and philosophy, relationship with students, etc. While teachers are commonly trained for teaching, they may not be versatile in conducting experiential learning activities. On the other hand, social workers may have skills in

running groups and mass programs, but they may not have skills for classroom management. Therefore, it is important to compare the quality of program implementation by teachers and by social workers and to find out which role is more appropriate to teach this youth development program at school.

Third, the curriculum was designed differently for students at different grades in response to adolescent psychosocial needs at different needs. For example, for the same purpose of fostering good communication and bonding, while the Secondary 1 curriculum emphasizes the promotion of trust and understanding among peers and teachers, the Secondary 2 curriculum focuses on promoting bonding with parents in the family context (Lee, 2007; Shek & Yu, 2010). Therefore, the difficulties or smoothness of the program implementation at different grades may not be the same.

Against the above background, the present book chapter aims to further address the above issues based on a consolidated dataset including several cohorts of interim evaluation data. Specifically, integrative analyses were carried out to understand the program implementation in the following aspects: (1) the overall picture about the implementation quality of the Tier 1 Program of the Project P.A.T.H.S. in the full implementation phase and (2) the effects of program mode (full curriculum vs. core curriculum), identity of program implementers (social worker vs. school teacher), and grade (Secondary 1, Secondary 2, and Secondary 3 programs) on the program implementation quality. It was expected that the findings of the interim evaluation would generate useful evidence and lessons that would inform the implementation of the program in its next phase and serve as an important input for the effectiveness of the project.

Methods

Participants and Procedures

A total of 244 secondary schools in Hong Kong participated in the Project P.A.T.H.S. from 2005 to 2009, including 52 schools in the experimental phase and 214 schools in the full implementation phase. Among the participating schools, 46.27 % adopted the 20-h full program involving 40 units and 53.73 % adopted the 10-h core program involving 20 units in terms of the available time and arrangement in each school, respectively. Students in these schools received the program for three consecutive years from Secondary 1 through Secondary 3. Interim evaluation was conducted in both the experimental implementation phase and the full implementation phase.

At each year, about half of the participating schools at each grade were randomly selected to join the interim evaluation study. From 2005 to 2009, 236 grades which adopted the 20-h full program and 167 grades joining the 10-h core program were selected to participate in this study. During school visits, 265 teachers and 178 social workers were invited to participate in face-to-face interviews on a voluntary

basis. If the respondents were not available for the face-to-face interviews during the school visits, they were either interviewed through telephone or asked to fill in a self-administered questionnaire and return it to the research team via email or fax. The random sampling method increased the generalizability of the findings. Table 1 describes the characteristics of the datasets collected over the 4 years.

Instruments

In 2005/2006 school year, a self-constructed semi-structured interview guide with six open-ended questions was used to collect information on the program implementation process. In 2006/2007 to 2008/2009 school year, a modified self-constructed semi-structured interview guide was developed and used with five closed-ended questions. The first question asks the respondent to rate their perceived students' involvement in the program on a four-point Likert scale (1=totally not involved to 4=totally involved); the second question enquires the extent to which the teacher or social worker perceive students like the program on a four-point scale (1=strongly dislike to 4=strongly like). Question 3 requires the respondents to rate the degree to which they consider the Tier 1 Program as helpful to students on a five-point Likert scale (1=unhelpful to 5=very helpful). The fourth question assesses the respondent's own liking of the program (1=strongly dislike to 4=strongly like). The last question measures respondent's overall satisfaction to the program on a 6-point Likert scale (1=very dissatisfied to 6=very satisfied).

In addition, seven open-ended questions were used to collect information on the program implementation process. The open-ended questions were as follows:

Question 1: What are the responses of the students to this program?
Question 2: Do you think this program is beneficial to the students? If yes, what are the benefits?
Question 3: What are the good aspects of the program?
Question 4: Which areas of the program require improvement?
Question 5: Have you encountered any difficulties during the program implementation process? If yes, what problems have you encountered?
Question 6: What are your perceptions of the "Co-Walker Scheme"?
Question 7: Do you have other opinions?

Data Analyses

The qualitative data were analyzed by two trained research assistants, and the detailed data analyses procedure has been reported elsewhere (Shek & Yu, 2012). For the quantitative data (closed-ended questions), frequencies and percentages of responses for the whole sample and at each grade were first calculated. Second,

Table 1 Schools participated in the Project P.A.T.H.S. and interim evaluation study in 2005–2009

| | Experimental implementation phase | | | Full implementation phase | | | | | |
| | S1 | S2 | S3 | S1 | | | S2 | | S3 |
	2005/2006	2006/2007	2007/2008	2006/2007	2007/2008[a]	2008/2009	2007/2008	2008/2009	2008/2009
Total schools joined P.A.T.H.S.	52	49	48	207	213	197	196	198	167
(i) 10-h program	23	27	29	95	108	104	113	110	104
(ii) 20-h program	29	22	19	112	105	93	83	88	63
Total schools joined this study	25	25	25	100	NA	20	100	20	88
(i) 10-h program	10	11	13	30	NA	5	39	6	53
(ii) 20-h program	15	14	12	70	NA	15	61	14	35
Total respondents	28	32	29	111	NA	21	114	20	88
(i) Teachers	25	23	11	66	NA	12	64	14	50
(ii) Social workers	3	9	18	45	NA	9	50	6	38

Note: Data based on consolidation table. S1, Secondary 1 level; S2, Secondary 2 level; S3, Secondary 3 level; NA, not available
[a] For 2007/2008 school year, no data was collected at S1 level

means and standard deviations of each item were computed. Third, a MANOVA test was conducted to examine the effects of the curriculum mode (20-h full curriculum vs. 10-h core curriculum), interviewee's identity (teacher vs. social worker), and grade (S1, S2, and S3) on the interim evaluation results.

Results

The present chapter focuses on reporting the quantitative results of the interim evaluation study in the full implementation phase, i.e., three school years from 2006 to 2009. This is because the instrument for collecting data in the experimental implementation phase was slightly different from the one we used in the full implementation phase, which makes the data difficult to be compared.

Several observations can be found from the descriptive results of the interim evaluation over the 3 years (see Table 2). First, 92.86 % of the respondent schools reported that students were involved in the program well, which included 94.17 % of Secondary 1 implementers, 94.48 % of the Secondary 2 implementers, and 89.38 % of Secondary 3 implementers. Second, for the perceived students' liking of the curriculum, positive responses were reported by 93.33 % of the Secondary 1 instructors, 96.55 % of the Secondary 2 instructors, and 91.15 % of the Secondary 3 instructors, indicating that on average, 93.92 % of the program implementers perceived that students liked the curriculum. Third, overall 95.50 % of the respondents regarded the Tier 1 Program as helpful to the students, including 95.00 % of the Secondary 1 implementers, 93.79 % of the Secondary 2 implementers, and 98.23 % of the Secondary 3 implementers. Fourth, the majority of the implementers (87.83 % on average) expressed that they liked the program. By grade, 85.00 % of Secondary 1 implementers, 89.66 % of the Secondary 2 implementers, and 88.50 % of the Secondary 3 implementers showed positive answers. Fifth, an average of 94.75 % of the program implementers was satisfied with the program, including 90.00 % of the Secondary 1 instructors, 95.18 % of the Secondary 2 workers, and 98.23 % of the Secondary 3 workers. Finally, consistent with the percentage findings, the means for each item were on the positive side (Table 3) which suggests that different aspects of program implementation were perceived as positive. An examination of the percentage data in different years showed that the positive evaluation was consistent across time.

Moreover, the results of MANOVA showed that the effects of curriculum mode, interviewee's profession, and grade were all nonsignificant on the interim evaluation results. On the multivariate tests, no significant effects were found for grade [Wilk's Lambda=0.95, F (10, 590)=1.56, p=0.12], curriculum mode [Wilk's Lambda=0.99, F (5, 295)=0.73, p=0.60], and profession of the implementer [Wilk's Lambda=0.98, F (5, 295)=1.23, p=0.29]. The interactive effects among the independent variables were also nonsignificant. This suggests that different program modes (full curriculum vs. core curriculum), professions of program implementers (teacher vs. social worker), and grades did not affect the implementation

Table 2 Interim evaluation based on the consolidated dataset

Degree of student involvement perceived by the program implementers

		Negative response			Positive response				All
		Totally not involved	Not involved	Total	Involved	Totally involved	Total	No response	
S1	N	0	6	6	102	11	113	1	120
	Percentage	0 %	5.00 %	5.00 %	85.00 %	9.17 %	94.17 %	0.83 %	100 %
S2	N	0	7	7	129	8	137	1	145
	Percentage	0 %	4.83 %	4.83 %	88.97 %	5.52 %	94.48 %	0.69 %	100 %
S3	N	0	10	10	94	7	101	2	113
	Percentage	0 %	8.85 %	8.85 %	83.19 %	6.19 %	89.38 %	1.77 %	100 %
Total	N	0	23	23	325	26	351	4	378
	Percentage	0 %	6.08 %	6.08 %	85.98 %	6.88 %	92.86 %	1.06 %	100 %

Degree of students' liking of the program perceived by the program implementers

		Negative response			Positive response				All
		Strongly dislike	Dislike	Total	Like	Strongly like	Total	No response	
S1	N	0	5	5	108	4	112	3	120
	Percentage	0 %	4.17 %	4.17 %	90.00 %	3.33 %	93.33 %	2.50 %	100 %
S2	N	0	4	4	137	3	140	1	145
	Percentage	0 %	2.76 %	2.76 %	94.48 %	2.07 %	96.55 %	0.69 %	100 %
S3	N	0	8	8	100	3	103	2	113
	Percentage	0 %	7.08 %	7.08 %	88.50 %	2.65 %	91.15 %	1.77 %	100 %
Total	N	0	17	17	345	10	355	6	378
	Percentage	0 %	4.50 %	4.50 %	91.27 %	2.65 %	93.92 %	1.59 %	100 %

Degree of perceived helpfulness of the curriculum to the student perceived by the program implementers

		Negative response			Positive response				No response	All
		Unhelpful	Not very helpful	Total	Slightly helpful	Helpful	Very helpful	Total		
S1	N	0	4	4	57	54	3	114	2	120
	Percentage	0 %	3.33 %	3.33 %	47.50 %	45.00 %	2.50 %	95.00 %	1.67 %	100 %
S2	N	0	7	7	74	56	6	136	2	145
	Percentage	0 %	4.83 %	4.83 %	51.03 %	38.62 %	4.14 %	93.79 %	1.38 %	100 %
S3	N	0	1	1	58	49	4	111	1	113
	Percentage	0 %	0.88 %	0.88 %	51.33 %	43.36 %	3.54 %	98.23 %	0.88 %	100 %
Total	N	0	12	12	189	159	13	361	5	378
	Percentage	0 %	3.17 %	3.17 %	50 %	42.06 %	3.44 %	95.50 %	1.32 %	100 %

Degree of liking of the curriculum by the program implementers

		Negative response			Positive response			No response	All
		Strongly dislike	Dislike	Total	Like	Strongly like	Total		
S1	N	0	3	3	95	7	102	15	120
	Percentage	0 %	2.50 %	2.50 %	79.17 %	5.83 %	85.00 %	12.50 %	100 %
S2	N	0	1	1	116	14	130	14	145
	Percentage	0 %	0.69 %	0.69 %	80.00 %	9.66 %	89.66 %	9.66 %	100 %
S3	N	0	0	0	91	9	100	13	113
	Percentage	0 %	0 %	0 %	80.53 %	7.96 %	88.50 %	11.50 %	100 %
Total	N	0	4	4	302	30	332	42	378
	Percentage	0 %	1.06 %	1.06 %	79.89 %	7.94 %	87.83 %	11.11 %	100 %

(continued)

Table 2 (continued)

Perceived degree of workers' overall satisfaction of the curriculum

		Negative response				Positive response					
		Very dissatisfied	Dissatisfied	Slightly dissatisfied	Total	Slightly satisfied	Satisfied	Very satisfied	Total	No response	All
S1	N	0	1	7	8	26	78	4	108	4	120
	Percentage	0 %	0.83 %	5.83 %	6.66 %	21.67 %	65.00 %	3.33 %	90.00 %	3.3 %	100 %
S2	N	0	0	7	7	40	96	2	138	0	145
	Percentage	0 %	0 %	4.83 %	4.83 %	27.59 %	66.21 %	1.38 %	95.18 %	0 %	100 %
S3	N	0	0	2	2	21	88	2	111	0	113
	Percentage	0 %	0 %	1.77 %	1.77 %	18.58 %	77.88 %	1.77 %	98.23 %	0 %	100 %
Total	N	0	1	16	17	87	262	8	357	4	378
	Percentage	0 %	0.26 %	4.23 %	4.49 %	23.02 %	69.61 %	2.12 %	94.75 %	1.06 %	100 %

Table 3 Overall means and standard deviations of interim evaluation items

	Range	Mean	SD
Q1: How do you think about students' involvement in the program?	1–4	3.01	0.36
Q2: Do you think the students like the program?	1–4	2.98	0.27
Q3: To what degree do you think the Tier 1 Program is helpful to students?	1–5	3.46	0.62
Q4: Do you like this program?	1–4	3.08	0.31
Q5: Your overall satisfaction to the program?	1–6	4.70	0.60

Note: For each item, higher score represents for more positive response

Table 4 Interim evaluation results by groups

		Grade			Interviewee's identity		Curriculum mode	
	Range	S1	S2	S3	Teacher	Social worker	Full	Core
Q1	1–4	3.03 (0.39)	3.02 (0.31)	2.99 (0.39)	3.02 (0.36)	3.01 (0.36)	2.99 (0.35)	3.04 (0.38)
Q2	1–4	2.97 (0.29)	3.00 (0.22)	2.96 (0.32)	3.00 (0.28)	2.96 (0.26)	2.97 (0.26)	2.99 (0.29)
Q3	1–5	3.49 (0.63)	3.43 (0.67)	3.52 (0.60)	3.50 (0.68)	3.41 (0.55)	3.48 (0.63)	3.43 (0.62)
Q4	1–4	3.03 (0.32)	3.10 (0.33)	3.09 (0.29)	3.10 (0.33)	3.06 (0.28)	3.08 (0.30)	3.07 (0.33)
Q5	1–6	4.64 (0.72)	4.67 (0.58)	4.80 (0.48)	4.71 (0.60)	4.66 (0.61)	4.72 (0.57)	4.64 (0.64)

Note: Values in the table are means and standard deviations with values in parenthesis represent for standard deviations
Q1: How do you think about students' involvement in the program?
Q2: Do you think the students like the program?
Q3: To what degree do you think the Tier 1 Program is helpful to students?
Q4: Do you like this program?
Q5: Your overall satisfaction to the program?

quality of the Tier 1 Program of the Project P.A.T.H.S. The means and standard deviations of each item for different groups are listed in Table 4.

Discussion

In this chapter, interim evaluation results of the Tier 1 Program of the Project P.A.T.H.S. based on several datasets collected over 3 years were integrated and analyzed. The effects of different factors that might affect the program implementation quality were examined. The results suggest that the Tier 1 Program was implemented well in term of participants' involvement and liking of the program, implementers' perceived program effectiveness, and their liking and satisfaction about the program. The implementation quality measured by the interim evaluation form was basically equivalent across different curriculum modes, program implementer's identities, grades, and across time. In view of the scarce of interim evaluation findings in both Western and Chinese contexts, the present study has made a fresh contribution to the literature.

As for the overall program implementation quality, program implementers reported that the participants were actively involved in the program; both the implementers and the participants liked the program. These findings are in line with previous results on process evaluation and subjective outcome evaluation (Shek, Ma, Lui, & Lung, 2006; Shek & Sun, 2010), in which students were observed to be highly involved in the Tier 1 Program and both program participants and implementers showed interests and positive evaluation about the project. The finding showing students' active involvement may be due to the highly interactive components in the curriculum and teaching method of the Project P.A.T.H.S. To elicit students' interests in the program and help them learn from experience, various activities related to different youth development constructs were designed. The program implementers are expected to encourage students' participation and teach in an interactive manner. Given that, it is not surprising to find that the students were highly involved in the program. At the same time, the interactive and participative nature of the program is quite unlike the regular subjects in the formal curriculum. The liking of the program by participants suggests that interactive teaching and experiential learning may be effective components for a successful program, which should be considered in designing youth programs in the future.

The majority of program implementers perceived the program as helpful for the participants and expressed that they were satisfied with the implementation of the program, which is consistent with previous qualitative evaluation findings by different stakeholders and the objective outcome evaluation results. For example, findings of focus groups involving program implementers based on randomly selected schools revealed that program implementers perceived the program to be beneficial to the development of the program participants (Shek, 2012). Findings on the objective outcome evaluation of the project collected at different time points showed that participants receiving the Project P.A.T.H.S. had significantly higher positive youth development levels and displayed less risk behaviors than did participants in the control schools (Shek & Ma, 2011; Shek & Yu, 2011b). Taken together, all these findings support the successful implementation of the Tier 1 Program of the Project P.A.T.H.S. in Hong Kong.

The positive interim evaluation results did not vary across schools taking different curriculum modes. While some schools adopted the 20-h full curriculum and others implemented the 10-h core curriculum, the quality of program implementation was perceived similarly. When summarizing good practices in adapting evidence-based programs, O'connor et al. (2007) suggested that it is important to identify the key elements that make the program effective and implement these components. In this way, the effectiveness of the original program can be largely achieved even with adaptations (US Department of Health and Human Services, 2002). For example, the Families and Schools Together (FAST) program allows local implementation planning teams to modify up to 60 % of the program content as long as they implement the core components identified by the program developer (Wisconsin Center for Education Research, n.d.). In designing the Project P.A.T.H.S., researchers have identified eight core competences (i.e., bonding, social competence, emotional competence, cognitive competence, behavioral competence,

moral competence, self-efficacy, and prosocial norms) from the 15 positive youth development constructs based on literature review, experiences in the piloting stage of the program, as well as the local context of adolescent development. These eight constructs were focused upon in the 10-h core curriculum. The current interim evaluation results showed that the core components were equally effective as were the full program of the Project P.A.T.H.S. in facilitating healthy development of adolescents, which provides evidence for the importance of the identification of key components in a successful program. When adaptation is necessary, the implementation of these core elements could avoid diluting the effectiveness of the original program, as the present interim evaluation findings suggest that the 10-h and 20-h programs were equally favored by the program implementers.

There is no significant difference between programs conducted by social workers and by school teachers in terms of the implementation quality. Different backgrounds of the program workers did not seem to affect the implementation of the Project P.A.T.H.S. It is believed that the personal qualities of frontline workers and particularly their attitude and teaching style are important for the smooth and successful implementation of a project (Lau & Shek, 2010). Therefore, in the Project P.A.T.H.S., the research team has put much effort in providing systematic trainings for all program workers. Regardless of one's identity (social worker or school teacher), every worker responsible for implementing the program at each grade is required to complete a 20-h training program including both e-learning program and a series of workshops. During the training program, teaching philosophy, pedagogical methods, and different personal assets were taught and shared. Such a training system guarantees that the curriculum of the program can be implemented consistently with high quality. The current finding that the program was implemented well by both social workers and school teachers further supports the usefulness and necessity of offering such training programs to different implementers. Furthermore, the findings demystify the common myth that teachers do not like experiential learning activities and social workers do not perform well in structured classroom settings.

It was also found that the quality of program implementation did not differ across grades. This suggests that the contents of the curricula for students at different grades were designed appropriately and well received by both the program implementers and participants. The grade-specific curricular equip teachers with systematic, developmentally based lessons and instructions to promote students' holistic development in different age. Although the foci of the curricula have been the same positive youth development constructs throughout the 3 years, the materials at each grade are novel and gradually deepened. Therefore, participants consistently showed interests and actively engaged in the program during the 3 years of implementation.

The outcomes of a program are contingent on the quality of program implementation. Interim evaluation helps researchers obtain important information about the process of program implementation in terms of the delivery of the program, the relevance of the program in relation to its objectives, short-term impact in the midpoint of program implementation, management performance, and potential problems in the program implementation (Lynch et al., 2001). As such, interim evaluation

results contribute to the improvement and adjustment of the program and could serve as an "early warning system" to avoid potential problems in the next step of program implementation. While there are few studies examining the implementation process of youth programs (Dane & Schneider, 1998; Durlak, 1997), the present integrative study provides some useful findings on the implementation quality of the Project P.A.T.H.S. in Hong Kong. Along with other evaluation findings (Shek et al., 2012), the interim evaluation findings generally suggest that the program has been well implemented across different grades, types of implementers, and curriculum modes. Different stakeholders evaluate the program to be beneficial to the program participants.

It is noteworthy that there are several limitations in the study. First, only a few items were used in the interim evaluation. Second, the present study focused on the quantitative data only. It would be helpful if observations based on qualitative evaluation data in the interim evaluation exercise could be considered. Third, as the identity of the respondents was not anonymous (data collected through personal interviews, telephone interviews, or questionnaires), there is a possibility of demand characteristics. However, this possibility is not high because negative comments were heard and suggestions for improvements were collected in the qualitative data. Finally, it should be noted that interim evaluation was carried out at one time point only. Despite these limitations, the present findings are consistent with those reported in Shek and Yu (2012), suggesting that the implementation quality of the Project P.A.T.H.S. in Hong Kong was high. In conjunction with other evaluation findings, the present study suggests that the Project P.A.T.H.S. is able to promote holistic development of junior secondary school students in Hong Kong (Catalano et al., 2012).

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Qualitative Evaluation of the Project P.A.T.H.S.: Narrative Findings Based on Focus Groups with Participating Students

Daniel T.L. Shek and Li Lin

Introduction

The Project P.A.T.H.S. (P.A.T.H.S. denotes *P*ositive *A*dolescent *T*raining through *H*olistic *S*ocial Programmes), tailored for junior secondary school students, was implemented to promote all-round development of Hong Kong youth (Shek, Ma, & Merrick, 2007). There are two tiers of programs in this project. The Tier 1 Program is a universal positive youth development program for students from Secondary 1 to 3, with normally 20 h of training for 15 developmental assets (e.g., bonding, emotional competence, and prosocial involvement). The Tier 2 Program is specifically provided for at least one-fifth of the students with greater psychosocial needs at each grade. As it is a pioneering project incorporating positive youth development perspective in Hong Kong, with more than 280 schools involved, concerns regarding its effectiveness have stimulated rigorous program evaluations. One concern of great importance is the effectiveness of the program from the perspective of participating students. Therefore, a number of evaluation studies on students were conducted. They included quantitative studies tracking participating students' objective developmental changes or comparing them with the nonparticipating students (e.g., Shek & Ma, 2012; Shek & Yu, 2012) and those reporting students' subjective evaluations after attending the Tier 1 Program (e.g., Shek &

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Sun, 2012a), as well as qualitative research interviewing students through focus groups for their descriptions and perceived benefits of the Tier 1 Program (e.g., Shek & Sun, 2012b). These evaluation studies all support the effectiveness of the Tier 1 Program in promoting positive youth development in multiple areas.

Despite much merits of quantitative evaluation research, such as value neutrality (Leung & Shek, 2011), focus-group interview outperforms quantitative program evaluation primarily in two aspects. First, the dynamic group process and interaction of group members can generate a great amount of useful information for the researchers (Asbury, 1995). Second, idiographic and unique real-life data, such as narratives and lived experiences, can be obtained (Guba & Lincoln, 1994). With groups of people discussing "a topic of mutual interest to themselves and the researcher" (Morgan & Spanish, 1984, p. 253) in a permissive and nonthreatening setting (Krueger & Casey, 2000), focus group is very useful to "obtain data about feelings and opinions of small groups of participants about a given program, experience, service or other phenomenon" (Basch, 1987, p. 414). However, limited evaluation studies of intervention program used focus groups (Ansay, Perkins, & Nelson, 2004), especially among Asians (Twinn, 1998). Although focus-group study has been criticized for its heavy reliance on the skills of moderators in data generation and the possible intimidation of self-disclosure in group context, especially when the participants are young (Heary & Hennessy, 2002), it is useful to supplement quantitative study, such as subjective evaluation of the program (e.g., Shek & Sun, 2012a), in further interpreting participants' objective rating (Morgan, 1997). Additionally, the use of focus group among Chinese youth is not only applicable but also effective to elicit ideas, as student participants would be more willing to share their opinions with the company of peers with similar experiences (Diambria, McClam, Fuss, Burton, & Fudge, 2009).

Shek and Sun (2012b) reported 29 focus groups of interviews with student participants to assess the effectiveness of the Tier 1 Program of the Project P.A.T.H.S. In their study, many students used positive descriptors (e.g., interesting and useful) and positive metaphors (e.g., magician and library) to evaluate the program, and they perceived substantial gains in various domains from the program (e.g., interpersonal and personal domains). Though a few students used negative words (e.g., boring and useless) or metaphors (e.g., combat and discipline director) to describe the program, the positive views outnumbered the negative ones. However, Shek and Sun did not present student participants' explanations for their descriptions of the program and their elaborations of benefits obtained from the program. As narratives of the participants probably cover a great amount of information helpful to evaluate and improve the program (e.g., "why" behind attitudes and behavior), there is a need to look at the related narratives.

As such, this chapter presents the narratives and lived experiences of the student participants recruited in Shek and Sun's (2012b) study. It attempts to seek explanations for the positive and negative responses and provides more evaluative information about the effectiveness of the Tier 1 Program.

Methods

Participants

A total of 29 focus groups were conducted to evaluate the Tier 1 Program of the Project P.A.T.H.S. with 252 participating students randomly selected from 28 consenting schools. The 28 schools were randomly selected from 244 schools that participated in the program from 2005 to 2009.

In the current study, 23 schools joined the full program (20 h for 40 units) and five schools joined the core program (10 h for 20 units). Additionally, 67.9 % of the respondent schools incorporated the Tier 1 Program into the formal curriculum (e.g., Liberal Studies, Life Education, and Religious Studies), while 32.1 % used class teachers' periods or other modes to implement the program. For the consenting schools, the workers randomly selected students to join the focus-group study. Each focus group with 3–12 informants lasted approximately 1 h.

Procedures and Instruments

The researchers and the research assistants individually or jointly moderated the focus-group interviews following an interview guide (Shek & Sun, 2012b). During the interviews, the participants were encouraged to verbalize their views and perceptions of the program. As the moderators adopted an open attitude toward the interviews, the participants were encouraged to express views of different nature, including both positive and negative views. After obtaining the consent of the participants, the focus-group interviews were audiotaped and fully transcribed by research assistants.

Narratives presented in this chapter mainly focused on (1) descriptors used to describe the program, (2) metaphors (i.e., incidents, objects, or feelings) used to represent the program, and (3) informants' perceived benefits of the program to themselves.

Results

Shek and Sun (2012b) revealed that the positive responses dominated over the negative responses when the students were asked to evaluate the Tier 1 Program of the Project P.A.T.H.S. through describing, making metaphors, and discussing benefits, with good intra- and inter-rater reliabilities. This chapter further reports students' explanations and elaborations for the descriptors, metaphors, and perceived benefits in order to understand the merits as well as shortcomings of the program. It should

be noted that we only present the ideas that were repeatedly reported during the interviews without exhausting all the ideas articulated by the student informants. The different types of responses can be seen in Shek and Sun.

Descriptors

When using three descriptors to portray the Project P.A.T.H.S., the students perceived the fun and usefulness of the program. According to their narratives, curriculum content, teaching method, and style are significant in influencing their perception of the program.

First, most students perceived the program as "interesting," "lively," and "relaxing," which made them "happy" and "involved" in the class. "Sometimes I feel that the topics are very interesting, so I want to learn about them"; "Life Education is very relaxing, and there are many activities to encourage students to participate in the class. The teacher also told us many things that we usually would not talk about. Life Education is good and it makes me quite happy," said two students.

Several possible factors lie behind such descriptions. The first regards the curriculum content of the program that is new, diverse, and different from what the students usually learn in school. "Much of the content concerns the subjects that we have not heard of before," said one student. "Not only have we learned what is in the textbooks and informative knowledge," said another student, "we have also learned about many psychological issues, such as love. Many books do not concern this topic, and the society in general does not consider that secondary school students should date. But the program discussed this topic and taught us the right knowledge. Therefore, I think this program is quite good and greatly diversified."

The second concerns the teaching method, which incorporates multiple teaching strategies, such as discussion, role-play, and other class activities with a student-centered perspective. The students were attracted by the "distinct" ways of teaching, saying, "During Life Education classes, many classmates who used to be reticent also spoke and answered questions bravely. During regular classes like Chinese, English, and Math, not many people answered questions. Perhaps because there were games, role-play, and sharing in Life Education, these students also participated in the class actively." The multiple strategies of teaching also made the knowledge more comprehensible, as reflected in one student's comment: "Watching video clips helped us understand the knowledge more easily. In other classes, there were only words but no pictures or video clips, so we could only use our imagination. If we could see pictures and watch video clips, we could know more about what has happened."

The final is the teaching style, which made the students feel relaxed and supportive. The program implementers (e.g., school teachers or social workers) made good use of humorous and interactive teaching, as well as self-disclosure, which

was greatly appreciated by the students. For example, some students commented, "The teacher used funny ways to attract the students' attention so that they listened to her. When the teacher found that some classmates were feeling awfully bored, she used funny ways to teach the main points"; "the teacher shared many personal experience with us; everyone was interested in hearing the teacher's experience." The program implementers did not judge students' performance in terms of obedience to class discipline or examination performance. Instead, they allowed students to fully express their opinions during the class and often interacted with them. In one student's words, "This class is relaxing. After we were bored by the previous class, we could relax during this class; no one would stop us every time we said something." The students did enjoy the interaction with teachers or social workers in class, with one comment shown in the following excerpt: "In the beginning, I felt that the program was very novel, interesting, and funny. I never had a class where social workers would talk with us during the class, except in primary school. So I felt that this class was quite interesting, so I listened [to the teacher] in class."

In addition to the great pleasure gained from the program, the students also found the program very "useful," "practical," "helpful," and "applicable to their daily life" because of the applicability and comprehensiveness of the curriculum. The Project P.A.T.H.S. was made to cater to the needs of secondary school students in Hong Kong, which was affirmed by the students, as mentioned by one student, "This program understands our mentality. It can predict the problems that we will face and shape our ability to solve them. Then we would know how to solve these problems in the future." In addition, the program focused on holistic development other than academic excellence emphasized in other courses. Hence, students were exposed to new experience and their diverse competencies could be developed. One student's comment affirmed this viewpoint, saying, "As to the topics of spiritual quality and self-determination, we cannot learn about them in Math, Chinese, or English lessons. But General Education is very special. We can gain knowledge in other fields like spirituality. Therefore, it should be helpful."

Generally, the students viewed that they learned a lot which could be applied in daily life and in the future life from the program. Specifically, some students perceived gains in their intrapersonal growth. "[The knowledge] can be applied into adverse situations we will encounter in the future. For instance, if I have stress, I will know how to reduce the stress after attending this program. In short, it is beneficial," said one student. Other students regarded it helpful to their interpersonal interaction. For instance, "some of the topics about daily life, such as friends, family members, family, interpersonal interactions, are quite helpful to adolescents, because we would always encounter them. Therefore, if the topic concerns social skills, we would participate in [the class] more actively."

In brief, many student participants showed great intrinsic interests toward the program and viewed it as useful and applicable for their lives. The narratives also demonstrated the importance of curriculum content, teaching strategies, and style in shaping youths' positive perceptions of the program.

Metaphors

Corresponding to the descriptions of the program, the students indicated their intrinsic interests toward and perceived utility of the program when making metaphors to represent the Project P.A.T.H.S.

The first category of metaphors highlights the fun and comfort of the program. The students used "PS2" (PlayStation), "watching movie," or "magician" to describe the fun of the program. As reflected by one student, the program is like a "magician," as "the class conjures many things for us like magic. One would be very happy when watching a magic show, and sometimes, we were similarly happy when we were taking this class." Additionally, the students highly praised the program through metaphors indicating their comfortable feeling toward the program. One student compared it to a feeling of "lying down on the lawn by oneself," because the program made people "feel very comfortable and relaxed." Another student considered that the program instilled a warm feeling into people's mind, which is like that "when it is snowy outside, one stays at home near the firewood with a cup of hot chocolate." The student continued to explain, "In other classes like Chinese, English, and Math, we had to face the teachers while they kept talking from day to night. When questions were raised, no one answered and thus [the class] was like dead air. But this class was very warm, because we could feel that all students participated in it actively and the teachers cared about us. When we shared something sad, the classmates would comfort us, so we felt very warm and comfortable."

The second category of metaphors indicates high usefulness of the program. The program could correct students' bad behaviors, which was illustrated in metaphors like "vacuum cleaner" and "air refresher." The program is like a "vacuum cleaner" because it "removes the 'badness' from a very bad person"; it is also like an "air refresher" which "inhales your bad habit and exhales a good habit." The program also provided students with diverse knowledge, which was indicated by metaphors of "library," "computer," "treasure chest," "book," "school," and other objects related with knowledge. "One can learn a lot in a library. Therefore, I feel that General Education is like a library. One can learn a lot during class. Unlike in English class where one can only learn English and in Chinese class where one can only learn Chinese, General Education is very broad and one can learn anything," said one student.

In summary, although the metaphors varied, they essentially demonstrated that the participating students obtained both fun and practical benefits from the Project P.A.T.H.S. More importantly, several students noted that effort was needed before harvesting gains, with one comparing the participation in the program as "farming" because "first one has to sow seeds and cultivate them with care; only then will they sprout and grow."

Benefits

The Project P.A.T.H.S. is expected to contribute to the promotion of multiple developmental assets. When being asked to talk about the benefits of joining the program, the student informants reflected their gains in competence, confidence, connection,

character, and care (5Cs), which are regarded as developmental assets possessed by positive developing youths (Lerner, Fisher, & Weinberg, 2000).

First of all, different from the regular courses in secondary schools which emphasize academic competence, the Project P.A.T.H.S. attempted to foster cognitive, behavioral, and emotional competencies among youth. The students did perceive enhancement in these competencies.

For cognitive competence, the students learned problem-solving skills, illustrated in the students' words, "The program gave us a model for solving problems; whenever we encounter problems, we can apply this model and solve the problem." Also, they improved on critical thinking, as reflected by a student, "My analytical and judgment skills have improved somewhat after this program. My thinking has expanded, which means I will not only think on one side but have more space to think about what I want." The program shaped the openness of mind among the youth, encouraging them to "jump out of the fixed mind-set." With "expanded thought," the students improved "the ability of making analysis and judgment after attending the program."

For behavioral competence, the students gained improvement in assertiveness, which has been downplayed in Chinese culture yet relevant to youth development (Steinberg & Silverberg, 1986). After attending this program, the students acquired assertive skills to resist risk behavior, which is exemplified in one student's words, "I feel that this program is helpful to us. For example, if someone offers you a pill, you know how to refuse it." In addition, the students increased their initiative in "communicating with others," "expressing one's personal opinions" as well as other aspects, as one student said, "I didn't like to take the initiative; I used to be passive. After this program, I became very active in doing things, such as helping the teacher." Lastly, they also perceived themselves more self-determined and capable to make decisions. Two students talked about their changes as follows: "Before joining P.A.T.H.S., I often asked my mother to choose because I did not want to think. Now, I have improved a lot"; "something is useful such as the one teaching us about choice making. It is unnecessary to follow all what the parents say. [We] need to have our own assertion."

For the emotional competence, the students improved in their stress management and emotional regulation. Secondary school students have "pressure from homework, teachers, classmates, and parents," but some of them "did not know how to relax in the past." This program thus taught them "ways to reduce pressure." One student said he would "think of the ways learned to relieve the stress," such as "doing exercises." Moreover, the "positive thinking" and "multiple perspective thinking" learned from the program also enhanced the students' resilience to challenges and adverse situations. They could "stop from negative thinking" and "know how to confront some problems." Lastly, some students described themselves as emotional, and this program taught them how to regulate negative emotion, which could be observed from these cases:

> I have a younger brother at home. Usually, I, the elder sister, am the one to bully him…. Now, at least I will not beat people for no reason; I know how to control my emotion.
> In the past, when my teachers criticized me, I couldn't stand it once they lost their temper. Now, I will not consider their temper first but will consider the content of their words… if they are wrong, I will refute them in a more peaceful way. Previously, I would unreasonably argue back with "So what? I don't want to do this! So what?"

Second, the program promoted students' self-confidence. Considerable students found themselves "more courageous," "more confident in learning," and "more assertive." The program provided students with many opportunities to speak in class, and the teachers often encouraged students to share their personal opinions and feelings, which helped them to build up their positive self-regard. One student illustrated, "It seems that my self-confidence has increased. I was very shy and did not like to raise my hand [to speak in class] before. However, my teachers encouraged me to raise my hand, and I gradually became very active in the activities." Also, the students learned to reflect on themselves and developed a better understanding of themselves, "knowing both their strength and weakness," which also increased their confidence. "I learned to know myself. People are not perfect; they certainly have something good with something bad. I lacked confidence before attending this class and usually did things in a causal way. But it is different now. I know my good side and bad side and will try to correct [the bad side]," said one student.

Third, the program helped to build up close and healthy connections of students with their peers, teachers, and families. The program offered opportunities for them to "meet new friends" and strengthen their existing friendships due to more communication and skills acquired to deal with peer relationships. For example, one student said, "Some of our classmates may be from other schools and we didn't communicate much [before]. Due to the group activities of P.A.T.H.S., we had more communication." Next, their relationships with teachers were improved as well. Teachers, who used to be authority figures, became "friends" of the students due to more "communication" and "self-disclosure." The students appreciated the close relationship with their teachers by saying, "Some activities involved both the teacher and students. We enjoyed ourselves and became closer to the teacher, which reduced the barrier between us." Finally, the bonding between the students and their families was also perceived to be improved. The students enhanced their understanding of parents and communication skills, which are helpful to improve the quality of parent-child relationship. "One General Education lesson told us that parents sometimes said something awful to us but they only did so for our sake. After that class, if my parents criticize me, I will smile and say 'I see.' If I argue with them, I will hurt them, and our relationship will become worse and worse, which I don't want to see. Now, it is better for me and my family," illustrated one student.

Fourth, the students learned to be the persons of character (i.e., integrity and morality; Lerner et al., 2000) in terms of improved ability to judge moral issues logically and increased orientation to conduct prosocial behavior. The students reported that they became able to "distinguish between the right from the wrong" and knew "what one should do and what one should not do." They refused to "do things that are contrary to public morals." Importantly, the students understood that many things are more valuable than money. It is exemplified by this utterance: "I have learned values; regarding materialism, we do not really need to possess so

much.... Some classmates said that they believed the best way to spend their final day was to be with their family. I heard the different feelings that various people have about different things."

Fifth, the students became more caring toward others and the society. The program provided them with chances to "have a deeper understanding of their peers" and to "learn how to respect others." They began to "listen to others' words" rather than "simply speak alone," to "be empathetic," to "consider others' feeling," and to "accept others' opinions for improving oneself." To illustrate, "I have learned to be more considerate of others' feelings. For instance, when they are unhappy, I shouldn't annoy them, hit them, or intentionally make the situation worse." Additionally, they realized the importance of "teamwork" and "cooperation." One said, "Sometimes we discussed a question in class, but a single student could not resolve the question. So we needed to find more people to resolve it together. Therefore, I learned [cooperation]." Furthermore, the program also shaped their sense of social justice (e.g., "be fair to everyone") and their responsibility to the society. They "learned more about voluntary work" through lectures and activities and enhanced their social responsibility. "The program talked about our aspirations and how to live in a happy life. We need to participate in the larger society someday, regardless of how good or bad our academic performance is. We should contribute to society," said one student.

To summarize, the perceived effectiveness of the Project P.A.T.H.S. lies in the enhancement of diverse developmental assets in various life domains of the participating students. These findings correspond to the objective of program in promoting all-around youth development.

Negative Responses

During the interview, some negative voices toward the Project P.A.T.H.S. emerged. Among them, most students complained about the curriculum content, as they "had already known the knowledge" from "parents," "teachers," or "books" or found the content "repetitive" across the classes, "not easy to comprehend," or "not close to the real/current life." "In Hong Kong, people of our age are happy, and there is little adversity that we have to encounter. The ideas are out of nowhere and just very far from applicable to our real life," claimed one student. Other students criticized the use of worksheet which required them to reflect on themselves, because they regarded it as "too much" and found that "the questions on the worksheet were similar across the classes." Additionally, a few students disliked the teachers due to their chaotic class management or teacher-centered teaching style. For example, one student regarded the teacher as a "director of discipline," because "she was fierce and often stopped students from talking, like [the teacher in the] 'Queen Class' (a Japanese movie about a teacher who appears cool and affectless)." The existing negative views cannot cover the advantages perceived by the majority of the students, but certainly direct us to further improve the program.

Discussion

This chapter highlights the narratives and lived experiences of the students in their evaluations of the Project P.A.T.H.S. The narratives enlarged the findings presented previously (Shek & Sun, 2012b) and helped us gain insights into the reasons underlying their descriptions of the program and perceived benefits.

The first theme that frequently emerged from the narratives of the students is their intrinsic motivation to participate in the program, which is reflected in the positive descriptors and metaphors. The students personally found the program interesting and autonomously engaged in it without being pushed. Such an intrinsic motivation is beneficial to favorable learning outcomes as well as emotional well-being (Ryan & Deci, 2000), because the students were self-driven. Specifically, the novelty and diversity of the course content probably aroused the students' interest in the program. The multiple teaching strategies also motivated and facilitated their learning. Teachers' humor, self-disclosure, and supportive behavior additionally encouraged students' active involvement, which did not only make them happy and relaxed during the class but also motivated them to learn. It is instructive to find that the interactive teaching is in sharp contrast to the didactic teaching predominated in Hong Kong schools (Salili, Zhou, & Hoosain, 2003). Didactic teaching as a primary pedagogy in Chinese culture emphasizes transmission of knowledge and assumes the authority of teachers yet without encouragement of students' active role in learning (Nie & Lau, 2010). It is arguably efficient in imparting knowledge in response to excessive examinations, but it dampens learners' intrinsic interest (Salili et al., 2003; Stipek, Feiler, Daniels, & Milburn, 1995). The program demonstrated the strength of using interactive over didactic teaching in motivating and facilitating youths' learning. In brief, the findings highlight the importance of curriculum design as well as the "people" factor, echoing the qualitative findings with other informants (e.g., Lam, 2009).

The second theme that repeatedly emerged during the interviews is utility and applicability. Instead of being just a "feel good" program, the Project P.A.T.H.S. successfully taught students the knowledge and skills that could be applied in the growing challenges that they have to encounter with age. Students' self-endorsed value of the program is also an important learning motivation which contributes to positive learning outcomes (Ryan & Deci, 2000). Despite a few students who found the knowledge far from applicable to daily life, the majority of the students perceived high value of the program as it met their personal demands, which probably motivated them into active learning. The findings affirm that the Project P.A.T.H.S. is tailor-made for secondary school youth in Hong Kong, echoing the findings in students' subjective evaluation of the program (Shek & Sun, 2012a).

Specifically, when being asked to evaluate how and why the program was useful or effective, the students listed various gains in their competence, confidence, connection, character, and care (5Cs). According to Lerner et al.'s (2000) view, an effective positive youth development program should successfully enhance youth developmental assets under 5Cs, which is evident in the Project P.A.T.H.S. The narratives suggest that attending the program possibly enable youth to (a) become more competent in thinking, action, and emotional regulation; (b) have more positive self-regard and more courage; (c) develop more intimate and healthy bonding with

peers, teachers, and families; (d) enhance morality and integrity; and (e) possess humanity and empathy toward other people and the society. The promotion of these developmental assets would contribute to youth thriving (Lerner, Almerigi, Theokas, & Lerner, 2005). These findings are generally congruent with the objective evaluation findings that documented participating students' positive changes before and after attending the program (e.g., Shek & Yu, 2012), which altogether suggest that the program objective of promoting youth holistic development was achieved.

The current study demonstrates the strengths of qualitative method in program evaluation. Qualitative study can tell story behind the objective numbers of quantitative survey (Nabors, Ramos, & Weist, 2001). The personal feelings and life experience shared by the participants provided insight into the reasons for positive and negative evaluations, which can guide future quantitative study to validate the reasons.

Notably, several limitations are warranted to interpret our findings and encourage effort in future studies. Firstly, as a qualitative study, the current focus-group study could not draw any causal relationships among the constructs, such as the relationship between interesting curriculum and youth positive development. Further research can test whether the program curriculum, teaching strategies, and style contribute to the effectiveness of the program via a quantitative approach. Secondly, despite the advantages of focus groups, quality of the findings is tied to the skills of moderator, especially when the informants are unskilled in verbal communication or anxious in offering opinions in group (Wyatt, Krauskopf, & Davidson, 2008). Therefore, experienced moderators should be employed to elicit individual and group responses or prevent intimidation within group setting in the future. Thirdly, the narrative findings were categorized into different themes referring to the analytical framework used in Shek, Lee, Siu, and Lam's (2006) study. Future study may group participants' responses into themes referring to the rigorous method used in King et al.'s (2005) study. Lastly, given the little elaboration of some informants, inclusion of other qualitative evaluation strategies (e.g., in-depth individual interview) would be helpful to further understand the subjective experiences of the students.

Despite these limitations, with acceptable sample randomly selected from one-tenth of the participating schools, the present study provides rich and saturated information (i.e., little new idea emerges; Morgan, 1997) to evaluate the program. The findings lend support to the effectiveness of the implementation in fostering holistic youth development among Hong Kong Chinese youths. Furthermore, it enlightens possible factors (i.e., curriculum content, teaching method, and style) contributing to participating students' perceived effectiveness of the program.

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Qualitative Findings Derived from Focus Groups Based on the Program Implementers

Daniel T.L. Shek and Su Lu

Introduction

The Project P.A.T.H.S. (P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme) is a two-tier positive youth development program—the Tier 1 and Tier 2 Programs—that aims to promote holistic positive development of junior secondary school students in Hong Kong. The Tier 1 Program, a universal positive youth development program, was provided to the Secondary 1–3 students at each school year from 2005 to 2009. In the previous study (Shek, 2012), the views of the program implementers collected through focus groups were summarized by descriptive statistics based on coded responses of the narratives. In this chapter, the views of the program implementers on the effectiveness of the program are illustrated through raw narratives. Three aspects of narratives extracted from transcriptions of the focus group interviews are reported: (a) implementers' perceived benefits of the program to the students, (b) descriptors that were used by implementers to depict the program, and (c) metaphors that were used to describe the program.

There are heated arguments on whether the perspective of implementers should be taken into consideration when evaluating the effectiveness of a program (Shek, 2008; Shek, Siu, & Lee, 2007; Shek & Sun, 2012a). First, it is noteworthy that teachers and social workers as implementers are trained which can guarantee their expertise as evaluators. Also, as professionals have an in-depth understanding of the

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program rationale, they can offer more accurate and insightful observations and perceptions concerning the effectiveness of the program (Shek & Sun, 2012b). Second, despite the potential role conflict and bias that could be brought into the evaluation by program implementers, reflective evaluation is a routine practice for them. As a result, it can be argued that they are actually encouraged to give sincere and honest evaluation of the delivered program. Lastly, based on the principle of triangulation, effective evaluation of a program should be gathered from different sources to prevent bias and obtain a more accurate picture of the program. All the above arguments indicate that implementers are in an equally valid position to evaluate the effectiveness of a program as students, if not better.

Program implementers also influence the effectiveness of the implementation process. Implementers are responsible for sharing their own experiences, recognizing students' personal sharing, and supporting them through timely feedback in order to create an encouraging atmosphere in the classroom (Shek & Sun, 2008). In addition, their attitudes and perceptions of the program will implicitly or explicitly influence students through the process of teaching and interaction (Donnermeyer & Wurschmidt, 1997). In investigating the role of program implementers, Shek and Sun found that implementer factors that facilitate the implementation process include (a) support for the program and appreciation for the program rationales, (b) student centeredness and responsibility, (c) passion and motivation to implement the program, (d) prior experience in running similar programs, and (e) trust and cooperation among implementers. In addition, they identified factors that might hinder the implementation process, including (a) unfamiliar with the program and its rationales, (b) received no training, (c) task-oriented, and (d) lack of appreciation. In summary, given the crucial role that implementers play in influencing the quality as well as evaluation of positive youth development programs, it is desirable that we understand their views of the program effectiveness in program evaluation.

The views of the implementers concerning the effectiveness of the program have been investigated with questionnaire surveys (Shek & Sun, 2007, 2010). Shek et al. (2007) investigated subjective outcome evaluation from the implementers. Through using questionnaire survey and open-ended questions, the implementers' views on the program, instructors, and perceived effectiveness of the program were assessed. Based on consolidated data, the researchers found that the majority of implementers perceived the program to be helpful to the students. Subjective outcome evaluation findings based on the views of the implementers and participants throughout the years can be seen in Shek and Sun (2012b) and Shek and Ma (2012b).

Apart from the above evaluation studies, the views of the program implementers have also been investigated with focus-group interviews. Focus group is an interview technique that gathers information from participants in a group manner rather than a one-to-one manner. This technique is commonly used in social science research with the assumptions that interaction among participants in a group produces "data and insights that are less accessible without the interaction found in the group" (Morgan, 1996, p. 2).

As a method that brings together attitudes and opinions of several participants through discussion over a topic of mutual interest (Morgan & Spanish, 1984),

focus group has been increasingly recognized by researchers in psychology and education for its indispensable advantages. First, both quantitative and qualitative methods can be used in the context of focus group. Byers and Wilcox (1988) argued that "focus groups, as a method of gathering qualitative data, may provide a new opportunity for communication researchers who are tired of the well-used hammers and provide the scientific community with a means of gathering information otherwise not obtainable" (p. 7–8). In addition, focus group improves understanding when used alone or with other methods, as either a precursor or a follow-up to quantitative investigations, or simultaneously with other data sources to triangulate data (Morgan & Spanish).

Second, focus-group interviews are compatible with qualitative research paradigm in that they comply with key assumptions of the qualitative paradigm (Brotherson, 1994), and they are flexible in that they promote interactions and discussion among participants. Third, by focusing on perceptions and opinions of different stakeholders, focus group enables direct contact and intensive encounter with key informants. Compared with conventional practice such as questionnaire surveys as well as one-to-one interviews, focus-group interviews allow researchers to gain substantive information in an easy and efficient manner. In addition, based on the assumptions that people are valuable sources of information, and that they are able to describe their perceptions and behaviors (Lederman, 1990), participants in focus-group interviews have the opportunity to clarify, extend, and provide examples. Fourth, focus-group interviews encourage interaction among participants, as well as free and open disclosure in a group context (Beck, Trombetta, & Share, 1986). Finally, focus-group interviews tap into interpersonal communications that emphasize certain cultural values or group norms (Kitzinger, 1995). Focus groups are especially sensitive to cultural elements hidden in different types of narratives or rhetoric that are popular in certain cultural groups. In summary, focus-group interviews have advantages in understanding in-depth perceptions and opinions from stakeholders. In this study, we will report evaluations of the Tier 1 Program from the perspective of the implementers using focus-group interviews.

Based on 36 focus-group interviews of the program implementers across 2005 to 2009, Shek (2012) showed that the program implementers generally had positive evaluation concerning the program as reflected by their use of positive descriptors and metaphors. They also perceived that the program was beneficial to the holistic development of the program participants. These results synergize with students' views toward the program's effectiveness (Shek & Sun, 2012b). However, as the coded responses were mainly presented in the form of percentage findings in the previous research, it would be desirable to examine the raw narratives of the program participants in depth as suggested by Morgan (1996). It can be argued that continuity and completeness of the narratives would bring extra in-depth information when aiming to learn the answers to the why and what of their responses. Hence, the current chapter will report the raw narratives of the implementers in the focus-group interviews. The in-depth analyses of qualitative evaluation from the students' perspective were reported in another chapter by Shek and Lin (2013).

A common practice in focus group is to ask participants to use metaphors or metaphorical descriptions to depict their feelings regarding the effectiveness of the program (Shek & Chan, 2010). This creative strategy "constitutes a displacement and an extension of the meaning of words; its explanation is grounded in a theory of substitution" (Ricoeur, 1978, p. 3). The metaphor could be a powerful way to convey a good amount of information with a single phrase. It works through using shared understanding to connect individual feelings with other people. It is useful in revealing special properties of an object or event that are otherwise difficult to present or describe, and thus making the understanding easier (Patton, 2002). As a result, we focus our attention on the metaphors that the implementers used and on how they shed light on the future development of positive youth development programs.

Methods

Participants

A total of 36 schools were randomly selected from the secondary schools that participated in the Tier 1 Program, with 36 focus groups conducted to examine the implementers' perceptions of the Project P.A.T.H.S. (138 teachers and 39 social workers). On average, 4.83 classes per school and 5.11 respondents per school attended the interview. The number of focus groups and participants could be regarded on the high side.

Instruments and Procedures

Two trained or experienced social work interviewers conducted the interviews collaboratively. They asked the respondents questions based on an interview guide designed with reference to the CIPP model (Stufflebeam, 2000) and previous research (Shek, Sun, & Merrick, 2012). The interviewers were aware of the importance of encouraging the respondents to express their views and perceptions of the program, both positive and negative, in an accepting manner. The interviews were audio recorded with consent from the respondents. The audio recordings were then fully transcribed and were checked for accuracy. For detailed information concerning the coding and analysis of data from focus-group interviews, please refer to Shek (2012).

Results

In a previous study, through coding the narratives into different categories and performing intra- and inter-rater reliabilities, Shek (2012) found that the descriptors and metaphors used by the program implementers were predominantly positive in

nature. In addition, the program implementers also perceived the program to be beneficial to the holistic development of the program participants. To get a more thorough understanding on the views of the program implementers, detailed narratives of the following categories are presented to further illustrate the effectiveness of the Tier 1 Program: (a) implementers' perceived benefits of the program to the students, (b) descriptors that were used by the implementers, and (c) metaphors that were used to describe the program.

Perceived Benefits of the Tier 1 Program

Most of the implementers perceived the program to be beneficial. Following the framework of Shek (2012), we identified perceived benefits for the students at several levels and summarized below. At the societal level, the students have a stronger awareness of citizen's responsibility after joining the program. Here is a reflection by one implementer: "We found that some students did not pick up things after the Christmas parties and the cleaning staff packed things for them. The next day after the Christmas holiday, we taught them about the topic of responsibility in class. Then they started to reflect on their own behavior at the Christmas party (e.g., 'ah, at the Christmas party, I indeed did not pack the room after eating and unwrapping gifts.'). They wrote very long reflections after class."

At the familial level, the implementers reported that the students had opportunities in reflecting their relationship with their parents and considered possible solutions in improving their parent-child relationship. One implementer said, "I showed the students the movie 'My father's funeral' and asked them what reflection they would have if the situation of their father was like that of the movie? Two students told me that they had gained a lot from the movie because they have long neglected their fathers. One of them told me that his father was not very good, but when he saw the movie, he thought that he should not have hated and disrespected his father or even complained about him. He wrote a long reflection after the class."

At the interpersonal level, the program enhanced students' communication skills as well as their sense of appreciating and accepting others. The program also improved instructor-student relationships and peer relationships. According to the teachers, "we have more chances in communicating with the students and understanding what they care about the most. At the same time, they get to know us more." "They respect the teachers more," "begin to cherish people around them," and "to learn to cooperate with others." Another implementer remarked, "The students used to be resistant to what we taught them. In an open atmosphere where free discussion and emotional support are available, they find what we taught them to be more acceptable." "The students were attentive to some issues that are closely related to their life, such as romantic relationships and intimacy," and "the topic of romantic relationship fits their needs pretty well," such as "gender role" and "gender difference," said three implementers.

At the personal level, there is evidence suggesting that the program promoted students' emotional competence, cognitive competence, beliefs in the future, spirituality,

and resilience. Some implementers observed improvements in students' emotional competence, "Emotional problem is very common in adolescents nowadays. The program taught them to freely express their true feelings when they are interacting with others" and "they can control their emotions better." The program enhanced students' understanding of themselves. For example, as revealed by one implementer, "the students enjoyed the lesson of Enneagram. They liked it such that they asked me to print a copy for them. Although the scale includes forty some items, they finished it very carefully and patiently. Some of the students were not as attentive as the others at first. When the others have finished, they started to worry and asked me to hold the answer for a while and wait for them. They were pretty concerned about it, because they found the answer very accurate." The program enhanced students' cognitive competence and spirituality. One implementer remarked, "the program is helpful and beneficial to the students. The biggest advantage of the program is that questions it designed do not have a fixed answer. Instead, the program trains the students to express their own opinions and views and to analyze questions from different angles. Although they are able to search for factual information by themselves on the Internet, their thinking can only be trained through stimulation from the teachers in class. They had longer and deeper reflections after class." He further indicated students' beliefs in the future were enhanced such that they began to make plans for the future, "…we asked the naughty students what they would like to do in the future; they might tell you that they wanted to be a hair stylist, rather than a lawyer or professions of that sort. They may not dare to say it in the past; now they can also talk about it after class. I asked them if they wanted this, how they would plan to achieve it. They would come up with a small plan, such as studying hard to enter secondary fourth grade or attend the IVE (Institute of Vocational Education). Or they would like to complete the sixth grade and then decide what to do."

Descriptors Used to Describe the Program

Majorities of the descriptors that were used by the implementers were positive, and a few of them were especially insightful. Some implementers believed that the program was "interesting" and "vivid" such that "it increased communication between the teacher and the students because what you teach is not something from the textbook but rather something about yourself, about daily life. I can feel that the students also like this kind of activities." Also, the teachers themselves also gained from the program as shown by the narrative that "when showing the movie about volunteers, I also reflected in which aspect I could improve. Some of the topics are so profound that it triggered me to reflect on them, such as contributing more to the society." Some implementers thought the program was rich in content and practical in the sense that it "assimilates the climate of the society, such as transformation of the society, distortion of values. The program instills positive values to the students. Although they may not fully accept them now, when they think again in the future, they may gain enormously from them."

Others found that although the program offered a chance for the students and the instructors to "travel together [with the student]," "the effectiveness of the program depends on how well they have prepared and how they recognize the program" and "only when a teacher finds the program to be important will he/she walk along with the students and be more involved in the program." Some implementers agreed that the program was "ideally good," but how beneficial the program would be depends on how much the students could absorb and digest, "it might take a long time for the effectiveness to come out" and "for them to apply what they have learned from the program in daily life situations."

Metaphors Used to Represent the Program

Metaphors used by the implementers could be grouped into three categories, namely, metaphors used to depict the program, the students, and their experiences during program implementation. For the program, some participants used different metaphors to describe the practical nature of the program. One interviewee used "comb" to describe the program, "…it combs different layers of different aspects of life. There are various types of values, including positive ones as well as negative ones. To teach the students to grow is to help them arrange their life path. Similar to combing hair in the morning, I teach them how to comb and they may cope more smoothly when they walk the life path on their own."

Some implementers described the program as things that are essential to one's health and life, such as "apple," "sunshine," "water," and "air":

- "I will use apple to describe it. Its existence is so meaningful, healthy, and it conveys positive information that everyone, no matter a grown man or a child, a teacher or a student, will accept. But as an apple can be made into different kinds of food the way you like, such as dessert, with or without peel, how to teach P.A.T.H.S. depends on your own way of teaching it. Different teachers have different ways of cooking the apple. While some of the students might be benefitted a lot after eating the apple, some students might not like it and are resistant to it, saying "same old stuff," although eating apple is good for our health. In general, I think most of them think it is important."
- "I will use sunshine. I think this course manages the students to see the bright and positive side of things. Although life is full of good and bad times, hopefully this program brings sunshine to their life; even if there is a dark cloud, it can go away faster; hopefully the sunshine is still there after the cloud."
- "I think it is like a cup of water, because it is beneficial and essential to our life as water is to our body. Although plain water seems boring, you can use it for cleaning, medicine, or different kinds of purposes."
- "I think it is like the air because usually you may not feel it but it is essential to you at any time and any moment. Similarly, values, views of merits, and other competencies are essential to you from the moment you were born to the moment you are dead."

Some implementers described the program concerning its richness in content and flexibility in implementation:

- "The materials are clear and formidable such that you may click and see whenever you feel like doing it. It is pretty user friendly, with many pictures, clear explanation for each category, and different and independent interactive activities."
- "It is like buffet; a school could choose to accept or to reject and to customize what they want to teach the students. It is flexible."
- "It is like Plasticine because it is highly flexible with high degree of freedom. At the same time, it is not overly diluted so that you are not able to grasp. It has its basic shape and texture and you can make it affluent by adding many other things."

Implementers used "baby bird," "growing flowers," and "trees" to depict the plastic nature of the students:

- "They want to fly, and the process is difficult. They have to wait, till they become fully fledged. This course is full of "waiting," waiting for their feedback, waiting for their discussion, and waiting for their sharing. But I think after the many moments of waiting, they can be full-fledged and can fly into the sky."
- "I would like to use growing flowers to make an analogue of the students. This course allows the students, who are growing rapidly at this stage, to make preliminary contact with the real world. We cultivate these flowers diligently, water, and fertilize them. Whether they could turn into fruits, we don't know yet. But we make our best in the part of planting; hopefully it will work."
- "It is like planting a tree that might take a long time. I agree with other teachers and colleagues on their belief on P.A.T.H.S., but the effectiveness of the program is more dependent on guidance from the teachers and maturity of the students. Although we may not witness their growth because we are not with them all the time, we understand that their growth is a lifelong process and we believe that they will blossom and have other improvements."

For their experiences during the program, different metaphors were used to depict its dynamic process. Some implementers used "saving" and "consuming money" to describe their experiences:

- "It is like a money box, each topic represents a certain amount of money. Teaching each topic is like adding money into the moneybox. If the students' reaction is good, it is like adding extra money into the box. It will become the students' asset that could be used in their future life and will bear interest."
- "It is like saving something useful into a sack; when they spend it during their process of growing, it will make a change. Although some of the things we teach are not that useful at the moment, they will come up to them when they have trouble. For example, one of the topics is about relaxation in which we teach them to ease their stress or emotions by deep breathing. Although they know how to breathe deeply by themselves, applying it when feeling emotionally out of control is especially beneficial. So we want them to know not only how to save money but also how to use money."

Some respondents used "hand in hand" to describe their relationship with the students in the program. "It is like holding hands but not pulling hands. With warm and comfortable feelings, everyone walks forward naturally. It is not like holding someone back, or very laborious, or exhausted. Sometimes you lead the students, and sometimes they lead you; we all gain from it. This is evidenced from their feedback that they are highly identified with the school and they cooperated with us." "The teacher stretched out one hand to them, and they walk together hand in hand. My task is not to pull them but to light up their ways and show them the way to go. We will walk together if possible."

Negative Responses

Among the mainstream positive voice of the program, we heard some negative voice. Some of the implementers used "cliché," "not useful at all," and "not changing anything in the students" to evaluate the program. These extreme opinions might be attributed to the program schedule being "too tight" and "too flexible," the materials being "lack of depth," students being "familiar with the cliché," "lack of civic awareness," and "not responsive enough." The more in-depth reason might be that it is "unrealistic to expect an effect from the program in such a short time" and "capacity constraints of the instructors."

Discussion

The purpose of this chapter is to examine the views of the program implementers on the Tier 1 Program of the Project P.A.T.H.S. in Hong Kong. Program implementer was found to be the most important factor contributing to a successful program implementation (Shek & Sun, 2008; Sun, Shek, & Siu, 2008). Echoing this finding, the present study highlighted the necessity of understanding the effectiveness of a program from the implementers' perspective by comparing the implementer's perspective with the participant's perspective (for detailed information, see Shek & Lin, 2013). Compared with the students, the teachers and social workers as implementers were more aware of the rationales of the project and were more able to verbalize their views and perceptions in a systematic way. In fact, when compared with the students, the program implementers were more comprehensive, logical, and articulate. Often, a statement was followed by an elaboration of an example, which makes their statement more comprehensive. For example, one implementer reported that the program enhanced students' sense of citizen responsibility. He further validated this observation by sharing students' reflections of their behavior at the Christmas party.

As evaluation is a complicated matter with different contextual meanings, focus-group interview is particularly beneficial in program evaluation because it

allows group members to describe similar experiences and generates output that is less common in surveys or individual interviews (Kitzinger, 1995). Based on tailored questions of the interview guide, focus group enables researchers to access reflections of the interviewees on directly targeted research questions, which might not be observable from other methods (Morgan, 1996). Given its indispensable advantages, focus group has been used extensively in effectiveness evaluation of youth prevention programs, such as tobacco prevention program (Mahoney, Stengel, McMullen, & Brown, 2000), community mentoring program (Pedersen, Woolum, Gagne, & Coleman, 2009), and pregnancy prevention program (O'Rourke & Key, 2005). Recently, accompanying with the implementation of the pioneering holistic positive youth development program of the Project P.A.T.H.S., there has been a surge of using focus group in Hong Kong (Shek, 2012; Shek, Ng, & Tsui, 2010; Shek & Sun, 2012a; Shek, Sun, & Tang, 2009), and the current study adds to the value of adopting focus group in evaluation studies.

Based on the reported descriptors, metaphors, and perceived benefits by the implementers, several conclusions could be drawn from the findings. First, in the eyes of the program implementers, the program was beneficial to the holistic development of junior secondary school students. Instead of focusing on problem behaviors, the Project P.A.T.H.S. focuses on building and improving the development of positive identities, values, and competencies, which could turn into resources that could be utilized by participants in times of need (Shek, 2006). According to Grant (1992), the key to preventing problem behaviors is the promotion of adolescent social, emotional, behavioral, and cognitive development. Based on feedback from the implementers, the program was able to promote students' competencies at the societal, familial, interpersonal, and personal level. More importantly, the program implementers highlighted the significance of the program as an asset- or resilience-building process. For example, many implementers highlighted its asset-building nature by using "money box" or "a sack" to describe the program. They recognized the preventive value of the program by indicating that "the effect of P.A.T.H.S. might need a longer time to reveal; it may help the adolescents in times of need." They further highlighted its protective value by stating that "P.A.T.H.S. is like immunity and helps the students lay a solid foundation. It is very energy consuming if you seek solution when there is a problem. As a preventive initiative, P.A.T.H.S. makes things easier because the students already have a layer of protection."

Second, the program was beneficial not only to the students but also to the teachers and the social workers as implementers. Some implementers used "hand in hand" to describe their positive interaction with the students. They emphasized that "with warm and comfortable feelings, everyone walks forward naturally. It is not like holding someone back, or feeling very laborious, or exhausted. Sometimes you lead the students, and sometimes they lead you; we all gain from it." They were also able to learn from the program. "When showing the movie about volunteers, I also reflected on which aspect I could improve. Some of the topics were so profound that it triggered me to reflect on them, such as

contributing more to the society," said one implementer. We find this especially meaningful because previous research has shown the interrelatedness of program effectiveness and the development of teachers and social workers as implementers (Ghazvini & Mullis, 2002; Weaver, 2002). Echoing reflection from case studies (Sun et al., 2008), the implementers reported that their relationship with the students was enhanced. They were excited about the improvement of the students and their enhanced relationship with the students, thanks to increased exposures and deepened disclosures.

Third, we should pay attention to the negative responses from the program implementers. As focus group helps to improve a program's fit to the demand of the target population (Clark, Scott, & Krupa, 1993; Law, 2002), negative responses, such as "not effective at all" and "no meaning at all," suggest there is a need to look into the constraints and find the origins of such negative responses in the future. Apart from problems in program design, teaching schedule, student receptivity, and other structural constraints, the most important factor that hinders the effectiveness of the program lies in the problematic attitudes of implementers (Donnermeyer & Wurschmidt, 1997; Shek & Sun, 2008). For example, an implementer complained that "I don't expect there should be any changes in the students, because I don't think this is a good program." We may infer that this implementer would bring this attitude when teaching and interacting with the students. "The effectiveness of the program depends on how well they have prepared and how they recognize the program," "Only when a teacher finds the program to be important will he/she walk along with the students and be more involved in the program," said two implementers. As a result, future program training for the implementers should focus on not only program rationales but also attitudes toward the program and a sense of responsibility. Despite all the negative voices, the value of the Tier 1 Program could not be underestimated.

Last but not least, long-term effects of the program should be highlighted. Although feedback from the implementers concerning the project was positive, a few implementers reported that the immediate effect was not obvious. This might be because it might take a longer period for the effectiveness of the Project P.A.T.H.S. to emerge since a large proportion of the contents they learned from the class, such as resilience, could only play a role in the lives of the young students when they come across specific developmental problems or difficulties. This speculation was evidenced in the sharing of the implementers. For example, some of the implementers mentioned that the effectiveness of the program was like "wine" that can only take effect after a long time. These findings echo with the common belief of positive youth development researchers that "programs require sufficient time for evidence of behavior change to occur, and to be measured" (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002). In accordance with this statement, Shek and his colleagues found significant longitudinal impacts of the Project P.A.T.H.S. on the adolescent development of junior secondary school students in Hong Kong; the participants had better positive development and lower level of risk behavior 3 years after the completion of program (Shek & Ma, 2012a; Shek & Yu, 2012).

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Evaluation Based on Weekly Diaries Written by the Students

Daniel T.L. Shek and Rachel C.F. Sun

Introduction

The use of diaries is common in different contexts. In the clinical context, helping professionals often ask clients to describe their experience and behavior in diaries, such as behavioral diaries in behavioral modification programs (Peterson, Tremblay, Ewigman, & Popkey, 2002). A psychiatrist may ask depressed clients to put down their thoughts and emotions on a notebook daily or weekly. A social worker may also ask a student to describe his behavior with peers on a weekly basis so that inter-personal problems of the client can be analyzed. In psychotherapy, one classic example is the diary of Rita reported in the book entitled *A Young Girl's Diary* with a preface letter by Sigmund Freud.

Diary writing has also been used in research in the contexts of social sciences and humanities. For example, to examine the relationship between alcohol consumption and sexual behavior, Leigh (1993) asked the participants to record their drinking and sexual activities. An analysis of the diary of Anne Frank can give a vivid description of the lives under the Nazi regime. Besides, diary writing is also emphasized in different professions. In the education field, teachers are generally

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encouraged to keep diaries or reflective journals on their teaching practice to nurture their reflective practice. Hobson (1996) pointed out that reflective journal "suggests question, identifies new areas to explore, reveals meaningful absences, and uncovers recurring patterns" (p. 16). For social workers, social work students are usually expected to write reflective journals during their field placements. Chaloner (2006) suggested that the use of personal journals could enhance the learning motivation and outcomes of students.

Finally, diaries or reflective journals have been used as an evaluation tool where the program participants are invited to write personal journals during or after the intervention (Barkhuizen & Feryok, 2006; Schmitz & Wiese, 2006). Using a qualitative research perspective, diaries can enable the evaluators to have a close encounter of the experiences and feelings of the program participants, and they were regarded as a promising process evaluation or subjective outcome evaluation strategy (Goldenhar & Kues, 2006).

In the Project P.A.T.H.S., students were randomly selected to write down their perceptions and feelings after joining the Tier 1 Program. From 2005 to 2009, among the schools that participated in the project, 34 schools were randomly selected and invited to take part in 8 research studies, with 1,138 pieces of diaries collected. Shek and Sun (2012) described the procedures and sample characteristics of the study. According to this study involving eight datasets, about 81 % of the total responses on the program and 90 % of the total responses on the instructors were coded as positive. Besides, the participants generally perceived the program to be beneficial to their development in six domains, including societal, school, familial, interpersonal, personal, and other domains. As the qualitative data were coded and categorized in the datasets reported in Shek and Sun (2012), the detailed feelings and experiences of the participants were not presented in depth. In this chapter, weekly diaries written by the students regarding the unique attributes, wonderful features, instructors, benefits, memorable lessons, applicability of the program, and wishes for the sustainability of the program are presented.

Unexpected Wonderfulness: Attending Classes Can Be Very Happy Too!

Student A: "When I was promoted to Secondary One, I was so confused when I saw the word 'P.A.T.H.S.' I still remember when I first got in touch with this program; I thought it was some kind of group game or investigation. Nevertheless, when the teacher came in with piles and piles of worksheets, I got really scared! After realizing that the aim of this program is to teach us how to handle affairs and interact with people, I was quite disappointed. However, the lessons were not as boring as I thought; the instructor gave us time to have group discussions; it was so great that we could share our opinions freely.

Consequently, whenever we were divided into groups, I would listen attentively. At the same time, I also found myself in the course. I learned how to understand and appreciate myself and also how to handle affairs and interact with others. I learned that I have to understand myself clearly before I can improve my views

and attitudes toward life. I understand the perspectives from which I should interact with others and learn. These understandings will help a great deal in my studies. Therefore, I think 'P.A.T.H.S.' is not a random program; it is an important one in my Secondary school life. I will cherish the times when I can self-improve and the times when I can talk aloud!"

Student B: "I took 'P.A.T.H.S.' for about two years. At first, I thought that its contents and activities were quite naïve, but after two years of learning, my views on 'P.A.T.H.S.' have changed a lot. I learned a lot which I seldom learn in daily life from 'P.A.T.H.S.'; I am now more capable of distinguishing right from wrong. From 'P.A.T.H.S.' I also learned how to interact with friends and my family.

I believe that 'P.A.T.H.S.' is essential in daily life because it allows us to have more communications with our teachers. We can seldom communicate with them during regular lessons and after school. Therefore, 'P.A.T.H.S.' can allow us to communicate more with the teachers and help us develop a more positive value system toward life."

P.A.T.H.S.: An Extraordinary Program

Student C: "It has been a year since school started; among all the subjects, I like 'P.A.T.H.S.' the most. After taking this program, I believe that I have matured a lot mentally. Besides, I have come to realize my goals and ambitions, as well as ways to achieve them. Moreover, I can now distinguish right from wrong. After these lessons, I discovered that I had committed a lot of wrongdoings when I was young!

We employed a relaxing, but serious, mode in the 'P.A.T.H.S.' program. Sometimes, we would share our opinions in group discussions and then integrate the ideas into meaningful life principles. Everyone participated in the discussions; besides sharing our opinions, we would also share our personal life experiences. Sometimes, we would also joke around and relax a bit. Moreover, we would role play in some lessons; it was really interesting. After the role play, we would share why we acted in a certain way. For some topics, we would need to make some decisions that may reflect our personalities. In conclusion, I think 'P.A.T.H.S.' is a meaningful and interesting program. I hope I can still participate in 'P.A.T.H.S.' next year."

Student D: "In the Tier 1 Program, there were many lessons that took place in different formats to help us deal with problems in daily life, e.g., the principles of life, interpersonal relationships, and self-management techniques. The program was taught from different perspectives to suit people with different personalities. In addition, the course is different from others because there are a lot of interactions, group activities, and games that facilitate our understandings. We also have more time to apply what we have learned in the course. In general classes, teachers just teach us; we seldom have the opportunity to apply what we have learned. Therefore, we would often forget everything we have learned within a day, causing our efforts to be in vain. 'P.A.T.H.S.' is different from the other classes because it allows us to

apply what we have learned immediately in the games. I have learned a lot from the activities and discovered that interpersonal relationship is not as simple as one thinks: it is something that requires lifelong learning."

We Would Like to Give Thanks to Our Instructors!

Student E: "Throughout my participation in the Tier 1 Program of 'P.A.T.H.S.,' each teacher put a lot of effort into teaching us in the hope that some of the principles of life can be delivered to us. As for me, I learned that I must respect others, whereby we should not criticize others directly despite their imperfections in some areas. Also, I learned that we are all imperfect. Teachers delivered moral messages to us through worksheets. From the teachers' instructions, we also learned how to face difficulties with a positive attitude. Furthermore, besides teaching us theoretical knowledge, teachers also provided us with help and encouragements. Whenever we encountered difficulties, we could tell them. They were always there to listen and provide suggestions to solve the problems."

Student F: "I have been interested in life education since Form One. Compared to other lessons, it is the least stressful. This is because life education always uses daily life examples and is presented in a relaxing and funny way. In particular, our teacher is very funny and always talks in an interesting way, causing the atmosphere of the class to be very good; in this way, it is easier for us to learn the topics. By presenting the lesson in an interesting manner, class is definitely not boring. During some of the more serious topics, however, our teachers would make use of their professionalism and explain patiently to us. I really hope that I can apply what I have learned in the program to my daily life.

I have learned an important message about life with two short lessons per week. I once lost my confidence because of a failure. I was then trapped in the corner of my world and didn't know how to stand up again until one day I experienced a sudden revelation after hearing what the teacher said in the 'P.A.T.H.S.' program. She said that 'Life is an obstacle race; no matter what obstacle you encounter during the way, once you reach the goal, you will win.' At that moment, I realized that instead of rebuking myself because of one failure, I should stand up bravely to face the coming challenges in life. Whenever I fall during the race, someone will always be there to provide help. Once I stand up with courage, I will hear my heart beating with joy. By standing up with courage, the sparkle of life will continue to burn. What the teacher said has become my motto and my motivation to move forward."

My Gains in the Project P.A.T.H.S.: Personal Domain

Student G: "Within these three years, the topic that is the most beneficial for me is 'Resilience.' As there are so many difficulties that we have to face in life, the aim of this topic is to teach us how to overcome these difficulties with an optimistic attitude. I also learned other ways to overcome adverse situations. Life is not limited to a

single choice. 'If you step back, you will find that there are many ways to go.' This motto is very useful; it helps me understand that whenever I face an adverse situation, I should try to solve it from different perspectives. I will put this motto in my heart."

Student H: "After completing 'P.A.T.H.S.,' I have learned a lot. The most memorable topic was about values. In that lesson, we were asked to imagine that we have to escape from a beach, and among our parents, boyfriend, and money, we could only take two with us; which two would we choose? This lesson led me to understand whether I value family, love, or money. It helped me understand myself better. Besides, 'P.A.T.H.S.' changed my values in life. Many people took life for granted in the past, but after this lesson, I have changed my views on life; I cherish and respect life more."

Student I: "I believe that 'P.A.T.H.S.' is a very meaningful program. From this, I learned various ways to improve my social and interpersonal skills. It also helped me to have a better self-understanding and to learn more about how others think of me and why I was disliked by them. In the past, I could never make intimate friends. Even though I might have some, they would soon leave me and reject me as a friend, and I was very distressed about it. After hearing about 'P.A.T.H.S.' when I entered Secondary School, I got very interested because it can improve my interpersonal relationship.

I think the most helpful topic in this program was the ways in which we can deal with negative emotions and handle interpersonal conflicts. As I am a very negative person, the methods that I have learned through this program can help me eliminate my negative emotion easier and become happier. Moreover, the program can help me reduce interpersonal conflicts so as to improve my interpersonal relationships. I hope this program can help more people like me."

Student J: "After completing 'P.A.T.H.S.' I learned a lot about morality, virtues, and interpersonal skills. I was very involved in the program; I answered and asked questions actively. I now understand that when we face difficulties, we should overcome them by finding out where the problems lie and make improvements accordingly. The only way to solve the problem is to face it, not to escape from it.

In addition, I learned that life is meaningful. We should not give it up easily. I also found myself in this program; I discovered the good side of myself. Furthermore, I learned to appreciate the people around me, how to get along with others and to listen to them patiently… etc. Most importantly, I made more friends and developed a better understanding of the things around me. After this program, I have become happier and recognized my strengths and weaknesses. I also learned to let things go. I have thought about ending my life before, but when I think of my family, I know how sad they would be if I really do that. Therefore, I need to think in a more positive and open way. I discovered that things would be different if we think from different perspectives."

Student K: "Without this program, I won't be able to control my emotion, communicate with my parents and friends, and distinguish right from wrong effectively.

As time flies, my analytic and problem-solving skills have improved. I am not as impulsive as before, and now I always think before I act. Moreover, I now think from different perspectives. These were all learned from 'P.A.T.H.S.' Teachers allowed us to talk and share our opinions during the lessons, and thus, my presentation skill has also improved. I really grew up because of 'P.A.T.H.S.'"

My Gains in the Project P.A.T.H.S.: Societal and Family Domain

Student L: "I have learned a lot from the liberal study lessons this year, e.g., interpersonal skills, communication skills with strangers or friends, using the 'six thinking hats method' to understand things from different perspectives. There were a lot of impressive lessons this year. The most impressive one was the one that talked about the importance of family. It told us that it is not an easy task for our parents to nurture us, and they have spent a lot of time and money on us. Some of our classmates even cried during the sharing session. As a result, I remembered that class very well. I have gained a lot from the liberal study lessons this year."

Student M: "Time flies; now that I look back, I have really learned a lot and grown up a lot. In terms of the family aspect, I now understand that we should care for and help each other in the family. We should do some of the housework when we are free. We should also requite our parents for their caring and upbringing. I also learned that effective communication skills are very important: I now chat more with my parents and share with them how I feel, so that they don't always have to worry about me.

In terms of the social aspect, I learned that we must be disciplined. We should not jump the queue and talk loudly. We also need to make more new friends so that we will have a happy and varied life. In terms of the personal aspect, I learned that money isn't everything, but instead, health is the most treasurable thing in life. Nevertheless, many people still think that money is omnipotent; we should try to change this concept. In terms of the worldly aspect, I learned that a lot of people are living below the line of poverty. We should always help them to have a better living. We should do whatever we can.

What we have learned in 'P.A.T.H.S.' is uncountable. All of them are very useful to us. We should apply what we have learned in our lives, so that we can learn even more."

Student N: "I have learned a lot in this program, e.g., emotional control. Before I attended this program, I was very bad-tempered, and I was very rude toward my parents. After this program, I grew up a lot: not only did my temper improve, my attitude toward my parents has also improved. I don't lose my temper that easily and have become more optimistic and proactive. I have gained a lot from this program. In the past, I seldom speak up in the classroom besides group discussions; I will only talk to friends whom I am familiar with. Nonetheless, after this program, I have become more proactive in making friends. I have to thank 'P.A.T.H.S.' for the many friends that I have made thus far."

My Gains in the Project P.A.T.H.S.: Interpersonal Domain

Student O: "In retrospect, the Project P.A.T.H.S., in which I was a part of for a few months during my high school years, made me realize how important interpersonal relationships are. I remember when I first came to school, I had no friends. However, thanks to the school which provided two Project P.A.T.H.S. lessons per cycle, I was able to take parts in various fun activities (such as games), group discussions, and sharing times. At first, I found it a bit awkward to talk to new classmates that I did not know or had never met before, but after several discussions, I gradually became more confident in expressing myself, and eventually I got along really well with my classmates, becoming a part of the group, and making many new friends.

I think everyone can make friends by taking part in the activities offered by the Project P.A.T.H.S.; otherwise, we would never learn to take the initiative in communicating and associating with our schoolmates, and there would be no team spirit or cohesion. Now I can see how the Project P.A.T.H.S. has paved the way for our development during our secondary school years."

Student P: "Through taking parts in these activities, I really learned a lot which I would not have learned in a normal classroom. First, through the activities, I learned many skills for dealing with people, such as how to treat fellow students, teachers, friends, elders, and family. I also learned to appreciate other people, as well as myself. Through an understanding of myself, I came to see my strengths and weaknesses, so that I now know how to improve myself, as well as understand what I should or should not do. More importantly, it is now easier to make new friends, and I have learned the skills to communicate with my classmates and friends. These are very useful for my future development. I hope the program will continue, so that many other students can learn to recognize and appreciate both themselves and other people."

Student Q: "This program has definitely helped me save some time to renew my understanding of myself. Previously, I was always quiet and seldom spoke, as I thought it was better to stay silent, but in fact, that was not the case. I realize now that when I used to stay silent, I wasn't able to build up my communication skills. I didn't have many friends and, in turn, became more withdrawn. This program taught me how to face my own problems, as well as helped me to see how important communication really is. Through the program, I gradually became less silent and more willing to talk with other people and, consequently, improved my self-confidence. Now, I have close friends and get along very well with other people, as well as talk a lot to other people.

Of course, the program also covered many other aspects, explaining views on various other things, which I found interesting. The instructors gave fascinating, lively explanations, making the lessons times of enjoyment, and after a while, students were more ready to get themselves involved. All of these do require the right skills. I did enjoy the lessons and do hope the program will continue in its endeavors, succeeding in sending this message to others in an interesting manner and helping more students to think things out and develop their own individual potentials!"

Unforgettable Lessons

Student R: "'Shaolin Kung Fu' was my favorite unit during my time in the Project P.A.T.H.S. In this lesson, I learned not to hide my negative feelings when I felt unhappy, hurt, or angry toward others who put me down or said something to shift responsibility on me. I learned that there are five ways to face our negative feelings, such as talking about them to family members or friends. I also learned how to make a 'Secret Book of Shaolin.' This is an elegant and fine work, a lovely book that is easy to carry around with you, and when you are unhappy, you can always take it out for a good read to make any unhappy feelings go away."

Student S: "Time passes so fast, and I can't believe that I have already finished the Life Education course. I was really involved in studying the material, which I found very meaningful, and through which I have learned so much practical knowledge useful for living. Most impressive to me was the real-life story of Meredith, who managed to face her cancer optimistically, through sharing her experiences of treatment with netizens on a blog. Here, she encouraged and shared with other people her touching story, letting others know their self-worth and hoping that others will not abandon themselves in despair. Of course, we must not take our fortune for granted, and I am convinced of her brave spirit and care for her family.

Although Meredith has died, her spirit will continue to perpetuate. Meredith's mother learned to use a computer and regularly updated Meredith's blog, so we can still login to it. How great a mother's love is for her children! I also read her blog and was very touched by the girl's essays. I do hope that everyone is able to read her blog.

Apart from Meredith's story, the teachers and tutors also impressed me very much. They seemed deeply committed to their teaching and were willing to share their feelings and opinions, so that the students also became willing to share their own feelings. In this way, we all acquired a lot of knowledge. It would be great if we could continue having lessons on life for another year!"

Student T: "I was very impressed by the lessons 'The Warped Monster House' and 'Survivor.' 'The Warped Monster House' implied that there are many 'monsters' invading our daily lives, causing us to make wrong decisions, so that we will get 'lost,' and we learned how to beat these 'monsters.' As for 'Survivor,' in society, we often perform by working in teams, and this lesson gave us examples of how to survive when teams have just two members. Some of the team members will shirk their responsibilities when losing, while others are humble despite being victorious. In fact, for these lessons, the focus of our discussion and learning activities was on teams, as well as on being more aware of the importance of team cooperation.

The teachers guided us all the way, and when I did not understand what was happening, they guided my understanding. To conclude, I can describe this Life Education course of these past two years as a happy experience. My classmates became closer friends, and we found it much easier to communicate with one another. I am very grateful to have taken this Life Education course."

Student U: "During the P.A.T.H.S. activities, what impressed me most was Lesson 35 on 'Good or Bad,' in which we had a debate competition on optimism and pessimism. There were fierce arguments from both positive and negative sides, as each expressed their views on well-justified grounds. These exchanges certainly benefited my knowledge. During the debate, we were all very excited, as expressed by everyone's exaggerated gestures and boisterous exchanges. Then, it turned into utter chaos with the noise level getting out of hand; as a result, the teacher had to cut it short abruptly, shortening our debate time.

Apart from learning the pros and cons of optimism and pessimism, the debate also made me more aware of how important being polite is, whether in a debate or during normal communication. Both parties should reserve time for the other side to express their views, as well as to remain calm when listening to the other side. They should also not fight over who gets to speak first; otherwise, both sides will end up in a stalemate."

Applying What Was Learned and Being Grateful

Student V: "I was not aware that it has already been two years since I have first taken the Life Education course. The course has certainly benefited me immensely, and the lesson that impressed me most was 'The Beginning and The End.' During the lesson, when I heard the 'Story of Meredith,' I realized that we should always cherish our relationships with others who are close to us and lead a happy life, even if we see the future ahead as only leading to death. Previously, I never thought about death, but this lesson made me cherish my relationships with people more, as well as matters at hand.

In March of this year, my grandmother found out that she had a malignant tumor, and after this lesson, I went to visit her more often. Although she knew that she might not be around much longer, she still had a happy life, and I feel that despite facing death, she still treasured her remaining days. Although my grandmother has now passed away, I am still touched by the generosity she showed during her lifetime. So now, I love, and am obedient to, my parents every day. When we know how to cherish people, it does not matter even if we will die someday.

I still cannot believe that I have completed the 40 lessons of the Life Education course, but after taking it, I feel that I have changed: previously, I seldom took the initiative to answer questions, but now, I am enthusiastic about discussing, as well as answering questions. This course has changed me a lot, and although there will be no more of these lessons, I will always remember the words of my teachers. I do hope that there will be even greater changes in me as I continue through life, and I want to thank all the teachers very much for their lessons – I will always remember your words!"

Student W: "After more than one year of being in the Project P.A.T.H.S., I have learned a great deal. Before the course, I would easily feel sad and would break down in tears, but after taking the course, I now understand that nothing is absolute,

e.g., my poor academic performance may not just be due to my own faults, and that it is possible to see matters from different perspectives. Furthermore, I am now more aware of the advantages of goal setting. It is easier to achieve our goals if we have them set out before us, and the earlier we set our goals, the more momentum we have to achieve them!

What I found most impressive during the course was when the teacher taught us to be polite in problem solving, even when encountering impolite dialogues. We should not use words that do not help in solving the problem or words that may hurt other people's feelings. Since that lesson, I now understand that we can easily hurt others simply by the words we say. I hope that in future years, I can learn more about this!"

Student X: "I remember at the beginning of the semester, we found out that we were going to take the course on 'Life Education.' We were sure that this was a useless and boring course just like the moral lessons we had in primary school, which were so boring that we would fall asleep in class. However, since taking the course, I have gradually changed my mind, and now am even interested in learning the lessons.

During the semester, this course had a real impact on me. Not only did I have a better understanding of my classmates' opinions through discussions and exchanges with them, our friendships have also improved. Furthermore, when I had to complete the worksheets, they helped me to better understand my true inner self, and when we reviewed our work, we identified more of our strengths and weaknesses. Moreover, the relaxed classroom atmosphere and diversified activities encouraged greater class participation, and as a result, we learned even more. I still remember each and every activity.

What surprised me most was finding that I could actually put what I learned into practice. I recall once when I was about to lose my temper, I remembered the 'Secret Book of Shaolin' that was distributed in class. In the book, it says: 'When we are in a bad mood, take a deep breath and relax.' I did it and found that my tension just went away. Amazing! The above story is a true account of what I think about the course. I hope that the school continues to provide this course, and that all schools will provide it in the future!"

Student Y: "During the previous three years, we, our teachers, and social workers have created a healthy and happy road of development, and I am very happy to be on this road, where I continue to have unforgettable experiences deeply embedded in my mind…

The most impressive thing about this road of development started in Secondary 1, where we learned about 'Shaolin Kung Fu,' which taught us how to relieve stress. We all must face stress at one time or another, but there are many simple ways to relieve it, as practiced in 'Shaolin Kung Fu.' Through these simple methods, we can relax and alleviate our stress. It really does work, and other students may want to try them for themselves.

Another lesson I found unforgettable was in Secondary 2. This lesson was about dealing with family. At first, we did not find the lesson very interesting; then, upon

further explanation by the social worker, I suddenly found myself reflecting on my everyday relationships with my family. Our families are very important to us. In fact, scolding from our parents is actually very good 'medicine' for us. Brothers and sisters should live in harmony with each other, as well as be on good terms. In that classroom, I reflected on many meaningful things.

Now in Secondary 3, I do have a better understanding of myself. 'Appreciation' is another impressive theme we have learned in the last three years. My classmates would give fellow students, whom they appreciated, 'notes on their character.' I was very happy when I received the notes because I found out what kind of person I was in their eyes. Even now, I still treasure those little pieces of paper that I received, which served as valuable encouragement and support for me.

Through this course, I have learned a lot about life. It has certainly deepened my understanding of myself, as well as of my classmates and teachers, and has guided us all to reflect on and strive to face our futures. I am very happy to have participated in this course. I am also confident that this never-ending road of development will continue to go on…"

Hope the Program Can Continue

Student Z: "I have learned a great deal from having been involved in the Tier I Program of the Project P.A.T.H.S., including how to lessen my distorted and negative thinking. In addition, and more importantly, I have learned how to be self-reliant in the face of adversity. We will succeed only if we boldly face our difficulties.

Through the entire course, what impressed me most was the lesson called 'To Live a Day,' in which I realized the real meaning of life through Meredith's story. Although Meredith lived a short life, she still strove to live through all of her days, hoping to find in each day a better day than the one before, and in combating her illness, her bravery was touching. Her story reminded me of those people who give up or even commit suicide when suffering setbacks. All they need is self-esteem! We should all realize that many people want to live longer. If only we could be more considerate of others, the world would be a much better place!

The year passed so quickly, and before I knew it, the Tier I Program was over. I certainly have learned a great many things and have benefited greatly from the activities organized by the program. I do hope that in the future, I will have another opportunity to participate in the Project P.A.T.H.S."

Student AA: "Having taken part in the Tier I Program of the Project P.A.T.H.S., I was fortunate to have the careful guidance of the teachers who taught me a great deal about life, how to improve my communication skills, as well as how to deal with my emotions, so I will not lose my temper over minor matters. Furthermore, I have become more relaxed and have enhanced my contacts with my teachers, fellow students, and family. Previously, I was very shy and did not have the courage to ask my teachers for help on anything I didn't understand, and my school performance deteriorated.

Fortunately, this course taught me to understand that 'I must have courage to face my problems,' so I am no longer shy about asking for help from my teachers.

Since completing the course, I feel that I have matured considerably and have learned a great deal about life. Therefore, I think the program should continue, so as to promote the overall growth of young people."

Student BB: "I took part in the activities of the 'P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme' in Secondary 3, organized by the School of Social Work Unit of Hong Kong Lutheran Social Service, Lutheran Church – Hong Kong Synod, and really learned a great deal from the activities, including how to manage my emotions, how to reduce everyday stress, how to communicate with people, about choices and decision-making, what love is, how to stay happy and contented, etc. Furthermore, I am very happy to have received many gifts. In addition, I am very grateful for the teachers' guidance in teaching us many things. We should never forget their contributions, and I found their lessons pleasant and interesting. This is why I enjoyed the course, and I will definitely participate again, if it continues next year."

Discussion

The diaries presented in this chapter clearly showed that the participants generally had positive perceptions of the program, instructors, and benefits. As only categorical and quantitative findings were reported in Shek and Sun (2012), the present findings give a more dynamic and detailed picture on the experiences and feelings of the informants. The present findings illustrate the benefits of the program and the positive experiences of the program participants. As weekly diary is a naturalistic research method with high ecological validity (Miles & Huberman, 1994), the diaries reinforce the conclusion that the Tier 1 Program is an effective program which promotes the holistic development of the program participants.

It is noteworthy that there are debates on the strengths and weaknesses of using daily diaries as a research strategy (Gillmore et al., 2001; Leigh, 2000; Morrison, Leigh, & Gillmore, 1999). As a qualitative method, the method of diary inherits the general limitations of qualitative research methods (Shek, Tang, & Han, 2005). For example, whether the informants are good at writing is a determinant of the qualities of the diaries. Besides, writing weekly diaries requires students' reflection and critical thinking abilities. With the examination-oriented education in Hong Kong, students may lack such abilities. Moreover, as Chinese people may lack the language to describe their feelings (Shek, 1998), this will affect the richness of the diaries. Furthermore, for students who are not good at using written techniques to express their experiences, this method may not be a good tool. This problem may be particularly acute in schools admitting students with poor academic achievement.

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Evaluation Based on Personal Construct Psychology: Findings Based on the Repertory Grid Test

Daniel T.L. Shek

Introduction

In the Project P.A.T.H.S., both quantitative and qualitative evaluation strategies were used to examine the effectiveness of the project. As far as quantitative evaluation is concerned, data based on objective outcome and subjective outcome evaluation studies were collected. For qualitative evaluation, data collected from open-ended questions, focus groups, and weekly diaries were examined. While these strategies are comprehensively and commonly used in the field of evaluation, there are several criticisms for these strategies. First, quantitative methods are criticized as too mechanical and looking at outcomes from the view of the experts. Second, qualitative methods are criticized as too "soft," and it is difficult to generate generalizable patterns of outcomes. Finally, there is the criticism that the informants may be able to guess the intention of the study such as in questionnaires and focus groups, hence making it possible to have inflated positive outcome effects as a result of demand characteristics. In response to these criticisms, repertory grid test under the approach of personal construct psychology was employed as an additional evaluation strategy to understand the effectiveness of the Project P.A.T.H.S.

According to Kelly (1955), individuals make sense of their world through a repertoire of constructs. Based on the philosophy of constructive alternativism, it is argued that people understand the world via alternative ways of subjective

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interpretation rather than pure response to environmental stimuli. Each person is like a scientist who constantly experiments how well his or her established constructs can anticipate events and refines them if necessary. At the same time, by looking at the constructs and constructions of a person, we can understand how one looks at the world.

Under personal construct theory, repertory grid test (RGT) was designed to understand a person's construction of the world through his or her own constructs. This technique was initially used in clinical settings, where an individual's constructs are understood through organizing a serial of "elements" in terms of a set of "constructs" (Walker & Winter, 2007). The elements refer to the persons (e.g., father and mother) and objects (e.g., different countries) of people's thinking to which they relate their concepts, while the constructs are the "goggles" through which they see the world; they are bipolar mental representations (e.g., warm versus cold, diligent versus lazy) that people develop to interpret the elements. Both elements and constructs could be either elicited by respondents (i.e., elicited constructs) or assigned by practitioners (i.e., supplied constructs).

There are several unique features of the repertory grid test. First, it can be regarded as an idiographic approach to understand an individual's personal interpretation of the world where the subjective frame of reference of the informants is treasured. Second, the technique can yield both quantitative and qualitative data (Bell, 2003). While some researchers analyzed the themes of the constructs qualitatively (Green, 2004; Pike, 2011), others used statistical analyses such as hierarchical cluster analysis and principal components analysis to examine the similarities across samples, constructs, and elements, respectively (Borell, Espwall, Pryce, & Brenner, 2003; Feixas, Montebruno, Dada, del Castillo, & Compañ, 2010). Researchers can also use quantitative grid data for further statistical analyses (Feixas et al., 2010; Winter et al., 2007).

The RGT has been used in some evaluation studies in Hong Kong (Luk & Shek, 2006; Shek, 2012b; Shek & Lam, 2011). Shek (2012a) reported evaluation findings based on data collected from 104 participants. In the study, each informant was administered a grid involving 10 elements and 12 constructs (10 elicited constructs and 2 supplied constructs). Analyses of quantitative and qualitative data based on the supplied constructs showed that the participants perceived that they understood themselves better and had stronger resilience after joining the program. Using data based on both elicited and supplied constructs, compared with the selves before joining the project, participants saw their selves after joining the program to be closer to their ideal selves, a successful person, and a mature peer (but farther away from a loser). Three exemplar cases were also reported in this chapter. Although the findings reported by Shek (2012a) are very positive, the analyses were based on both elicited and supplied constructs. As there are criticisms about the use of supplied constructs, there is a need to examine the changes in the self-identity system within the informants using elicited constructs alone. In this chapter, findings based on the elicited constructs alone are reported. Besides, six exemplar cases are described.

Methods

The repertory grid technique originally devised by Kelly (1955) and the self-identity system proposed by Norris and Makhlouf-Norris (1976) were used to assess the self-identification of the participants. In the present study, there were 10 constructs elicited using the triadic method. The constructs were then linked to elements by a 6-point rating scale, with 1–3 representing the contrast pole and 4–6 representing the construct pole. The grid was then analyzed by using the INGRID package devised by Slater (1977).

In the present study, a total of 108 students who had participated in the Tier 1 Program only were randomly selected from the participating schools to complete the grids. However, due to missing constructs or elements in four cases, only 104 cases were used for data analysis. The following ten elements were used to elicit the constructs:

Element 1: Self before joining the Project P.A.T.H.S. (past self)
Element 2: Self after joining the Project P.A.T.H.S. for 3 years (present self)
Element 3: Self at high school graduation (future self)
Element 4: Ideal self
Element 5: Father
Element 6: Mother
Element 7: An important friend
Element 8: A successful person
Element 9: A loser
Element 10: A mature peer

Without including the supplied constructs, the raw data for each grid (10 elements by 10 constructs) were analyzed by the INGRID 72 program (Slater, 1977). In the output of the analysis, there is a section on the distances between pairs of elements. Distances between elements represent the psychological distances between elements, with a minimum value of 0, a mean of 1, and the value seldom exceeds 2. Therefore, if the distance between a pair of element is close to 0, it means that they are seen as similar in the psychological space of the person. On the other hand, if the distance between a pair of element is close to 2, it means that they are seen to be very dissimilar in the psychological space of the informant. Norris and Makhlouf-Norris (1976) suggested that distances between elements generated by INGRID 72 could be used to examine how a person sees himself or herself as being similar or dissimilar to certain people and others (i.e., degree of identification with others).

To examine the perceived changes of the participants after joining the Project P.A.T.H.S., differences in the distances between the following pairs of elements were assessed:

(a) The mean distance between "Self before Joining the Project P.A.T.H.S." (Element 1) and "Ideal Self" (Element 4) versus the mean distance between "Self after Joining the Project P.A.T.H.S." (Element 2) and "Ideal Self" (Element 4): If the participants had positive changes after joining the program, it was

expected that the distance between E2 and E4 would be shorter than that between E1 and E4 (Hypothesis 1).

(b) The mean distance between "Self before Joining the Project P.A.T.H.S." (Element 1) and "A Successful Person" (Element 8) versus the mean distance between "Self after Joining the Project P.A.T.H.S." (Element 2) and "A Successful Person" (Element 8): If the participants had positive changes after joining the program, it was expected that the distance between E2 and E8 would be shorter than that between E1 and E8 (Hypothesis 2).

(c) The mean distance between "Self before Joining the Project P.A.T.H.S." (Element 1) and "A Loser" (Element 9) versus the mean distance between "Self after Joining the Project P.A.T.H.S." (Element 2) and "A Loser" (Element 9): If the participants had positive changes after joining the program, it was expected that the distance between E2 and E9 would be longer than that between E1 and E9 (Hypothesis 3).

(d) The mean distance between "Self before Joining the Project P.A.T.H.S." (Element 1) and "A Mature Peer" (Element 10) versus the mean distance between "Self after Joining the Project P.A.T.H.S." (Element 2) and "A Mature Peer" (Element 10): If the participants had positive changes after joining the program, the distance between E2 and E10 would be shorter than that between E1 and E10 (Hypothesis 4).

Results

As mentioned, repertory grid test data can be analyzed by both quantitative and qualitative methods. For quantitative data analyses, many computer programs are available to look at the psychological structure of the informants. For the present study, INGRID 72 was used to analyze the data. INGRID 72 generates a wide range of information, such as distances between elements in the psychological space of the informants. Researchers have used distances between elements to assess psychological and social alienation in young offenders (e.g., Stanley, 1985). Besides, utilizing the data based on the principal components analysis, researchers can examine the distances between different elements on the dominant constructs of the informants.

Group Analyses

Quantitative analyses of the distances between elements from the 104 informants gave support to the above hypotheses as follows:

- For Hypothesis 1, results showed that the mean distance between Element 1 (Self before Joining the Project P.A.T.H.S.) and Element 4 (Ideal Self) was significantly longer than the mean distance between Element 2 (Self after Joining

the Project P.A.T.H.S.) and Element 4 (Ideal Self): Mean distance $= 1.26$ versus 0.89; $t(103) = 12.55$, $p < 0.0001$; Effect size $= 1.31$. In other words, the informants psychologically identified themselves more with the "Ideal Self" after joining the program.

- For Hypothesis 2, results showed that the mean distance between Element 1 (Self before Joining the Project P.A.T.H.S.) and Element 8 (A Successful Person) was longer than the mean distance between Element 2 (Self after Joining the Project P.A.T.H.S.) and Element 8 (A Successful Person): Mean distance $= 1.18$ versus 0.92; $t(103) = 8.37$, $p < 0.0001$; Effect size $= 0.91$. That is, the informants psychologically identified themselves more with "A Successful Person" after joining the program.

- For Hypothesis 3, the mean distance between Element 1 (Self before Joining the Project P.A.T.H.S.) and Element 9 (A Loser) was significantly shorter than the mean distance between Element 2 (Self after Joining the Project P.A.T.H.S.) and Element 9 (A Loser): Mean distance $= 0.94$ versus 1.19; $t(103) = -9.28$, $p < 0.0001$; Effect size $= 0.89$. That is, the informants psychologically identified themselves less with "A Loser" after joining the program.

- For Hypothesis 4, the mean distance between Element 1 (Self before Joining the Project P.A.T.H.S.) and Element 10 (A Mature Peer) was significantly longer than the mean distance between Element 2 (Self after Joining the Project P.A.T.H.S.) and Element 10 (A Mature Peer): Mean distance $= 1.10$ versus 0.88; $t(103) = 7.27$, $p < 0.0001$; Effect size $= 0.80$. That is, the informants psychologically identified themselves more with "A Mature Peer" after joining the program.

Individual Grid Analyses: Exemplar Cases

In addition to group analyses, data collected by repertory grid tests can also be analyzed at the individual grid level. Six exemplar cases showing drastic positive changes in the informants after joining the Project P.A.T.H.S. are presented for illustration.

Exemplary Case 1 (Informant No. 5)

The informant perceived herself to have the following qualities before joining the Project P.A.T.H.S. (Element 1): like talking, indifferent, extrovert, care for friends, stick to established practice, hold on to one's view, has no sense of humor, willing to share innermost feelings with others, mean, and calculating (see Table 1). However, the informant perceived herself to have the following characteristics after joining the Project P.A.T.H.S.: like talking, passionate, extrovert, care for friends, welcome challenging tasks, always reflect on one's own faults, has good sense of humor, willing to share innermost feelings with others, mean, and not calculating. The perceptions of the different elements in the psychological space of the informant based on the first factor of the principal components analyses are presented in

Table 1 Raw grid form for Case No. 5

	1. Self before joining the Project P.A.T.H.S. (past self)	2. Self after joining the Project P.A.T.H.S. for 3 years (present self)	3. Self at high school graduation (future self)	4. Ideal self	5. Father	6. Mother	7. An important friend	8. A successful person	9. A loser	10. A mature peer	Construct pole (6 5 4)	Contrast pole (3 2 1)
1	6	5	5	5	2	5	4	5	6	5	Like talking	Does not like talking
2	3	5	5	5	2	4	5	4	4	5	Passionate	Indifferent
3	4	4	2	2	5	5	2	2	5	3	Extrovert (catch others' eyes)	Introvert
4	4	6	5	5	2	3	5	4	5	5	Care for friends	Self-centered
5	2	5	5	6	3	1	3	5	2	6	Welcome to challenging tasks	Stick to established practice
6	2	6	6	6	3	3	5	5	2	5	Always reflect on one's own faults	Hold on to one's own view
7	3	5	5	6	3	1	4	5	1	4	Has good sense of humor	Has no sense of humor
8	4	6	6	6	3	6	5	4	2	5	Willing to share innermost feelings with others	Introverted
9	2	3	5	5	3	3	5	4	4	5	Generous	Mean
10	2	5	5	5	4	5	5	5	2	5	Not calculating	Calculating
11	3	4	5	6	2	2	4	4	1	4	Understand oneself	Does not understand oneself
12	3	5	6	6	5	5	5	6	3	5	High resilience	Low resilience
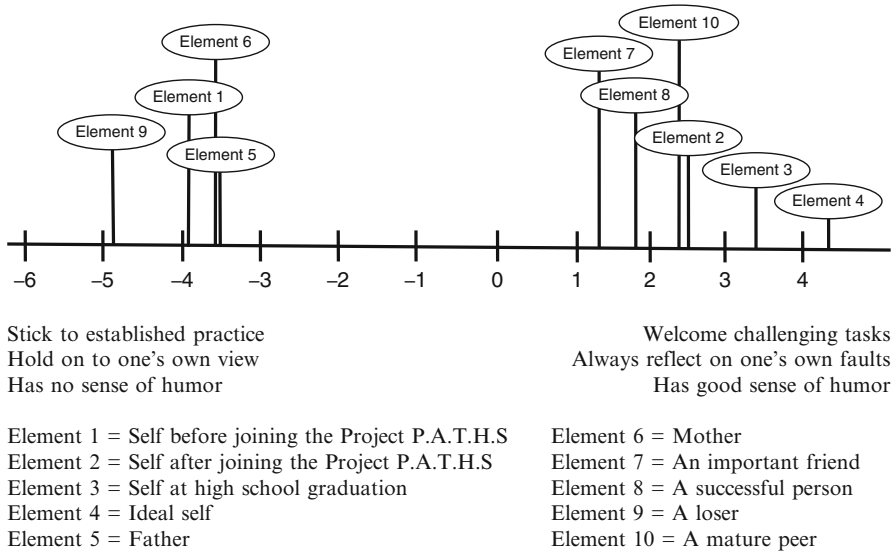
Fig. 1 Line graph showing the mental representation of different roles for Case 5

Fig. 1. In the line graph, the findings clearly suggested that the perceived selves of the informant before and after joining the Project P.A.T.H.S. were very different (one on the positive pole and another on the negative pole). An examination of the grid data showed that the informant perceived herself to be very close to a loser before joining the program. However, she began to identify herself with the ideal self, a successful person, and a mature peer (but not with a loser) after joining the program.

Exemplary Case 2 (Informant No. 13)

The informant perceived himself to have the following qualities before joining the Project P.A.T.H.S. (Element 1): absent-minded, pessimistic, bad temper, complexity in thinking, impetuous, insincere, nonrestrained, flexible in thinking, direct in talking, and selfish (see Table 2). However, the informant perceived himself to have the following characteristics after joining the Project P.A.T.H.S.: mindful, optimistic, good temper, complexity in thinking, calm and analytical, sincere, restrained, flexible in thinking, direct in talking, and selfless. The perceptions of the different elements in the psychological space of the informant based on the first factor of the principal components analyses are presented in Fig. 2. In the line graph, the findings clearly suggested that the perceived selves of the informant before and after joining the Project P.A.T.H.S. were very different and the positive changes after joining the program were remarkable. While the informant perceived himself to be very close to a loser before joining the program, he began to identify himself with the ideal self after joining the program.

Table 2 Raw grid form for Case No. 13

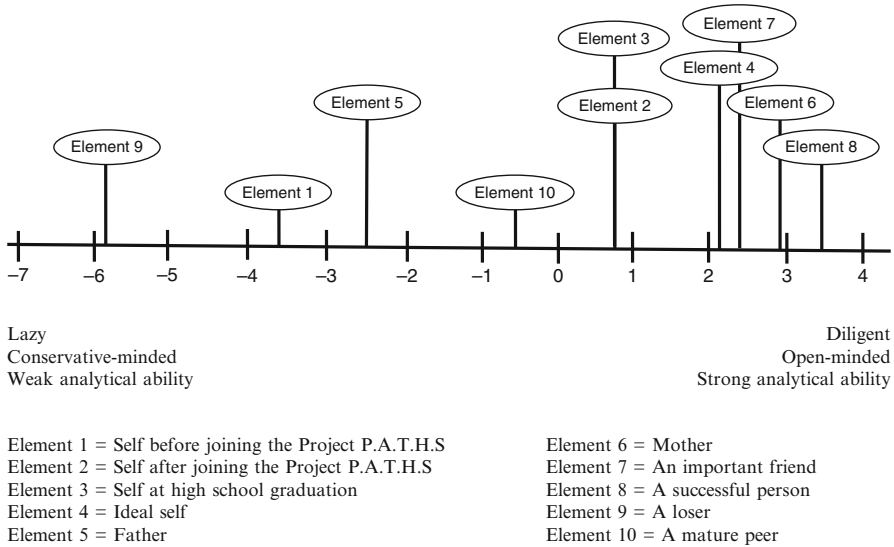|	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	Construct pole	Contrast pole
	Self before joining the Project P.A.T.H.S. (past self)	Self after joining the Project P.A.T.H.S. for 3 years (present self)	Self at high school graduation (future self)	Ideal self	Father	Mother	An important friend	A successful person	A loser	A mature peer	6 5 4	3 2 1
1	2	6	6	6	2	6	4	3	1	4	Mindful	Absent-minded
2	3	5	5	4	6	6	4	5	1	2	Optimistic	Pessimistic
3	2	6	6	6	5	5	5	5	1	3	Good temper	Bad temper
4	4	6	6	5	2	6	6	3	4	6	Complexity in thinking	Simpleminded
5	2	5	6	6	4	5	3	4	1	1	Calm and analytical	Impetuous
6	3	6	6	6	4	6	5	5	1	4	Sincere	Insincere
7	2	5	5	5	1	6	2	3	1	3	Restrained	Nonrestrained
8	5	6	6	6	4	5	5	3	2	5	Flexible in thinking	Rigid in thinking
9	3	2	1	3	3	5	5	5	3	5	Tactful in talking	Direct in talking
10	3	5	5	5	4	6	5	5	1	3	Selfless	Selfish
11	3	5	5	6	4	5	3	5	1	5	Understand oneself	Does not understand oneself
12	3	6	6	6	5	5	1	5	1	3	High resilience	Low resilience
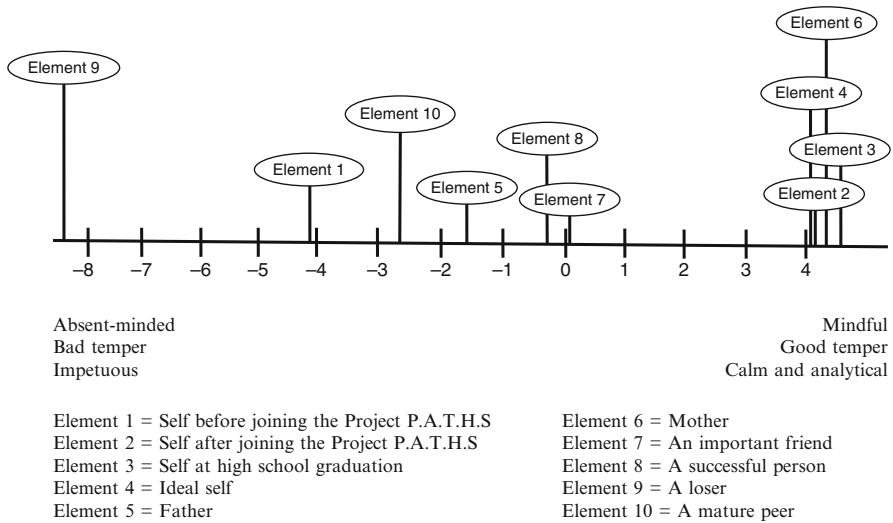
Fig. 2 Line graph showing the mental representation of different roles for Case 13

Exemplary Case 3 (Informant No. 67)

The informant perceived himself to have the following qualities before joining the Project P.A.T.H.S. (Element 1): relaxed, does not like thinking, not good at teaching, self-centered, easygoing, irritable, hold on to one's own view, be a follower, and introverted (see Table 3). However, the informant perceived himself to have the following characteristics after joining the Project P.A.T.H.S.: relaxed, like thinking, good at teaching, care for others, easygoing, irritable, open to advice, be a good leader, and expressive. The perceptions of different elements in the psychological space of the informant based on the first factor of the principal components analyses are presented in Fig. 3. In the line graph, the findings clearly suggested that the perceived selves of the informant before and after joining the Project P.A.T.H.S. were very different and these two elements occupied different poles. While the informant perceived himself to be very close to a loser before joining the program, he identified himself with the ideal self and a successful person (but not with a loser) after joining the program.

Exemplary Case 4 (Informant No. 11)

The informant perceived herself to have the following qualities before joining the Project P.A.T.H.S. (Element 1): lazy, open-minded, positive, optimistic, and weak analytical ability (see Table 4). However, the informant perceived herself to have the following characteristics after joining the Project P.A.T.H.S.: diligent, open-minded, positive, optimistic, and strong analytical ability. The perceptions of different

Table 3 Raw grid form for Case No. 67

	1. Self before joining the Project P.A.T.H.S. (past self)	2. Self after joining the Project P.A.T.H.S. for 3 years (present self)	3. Self at high school graduation (future self)	4. Ideal self	5. Father	6. Mother	7. An important friend	8. A successful person	9. A loser	10. A mature peer	Construct pole 6 5 4	Contrast pole 3 2 1
1	1	2	2	2	6	4	3	4	2	5	Tense (handling things)	Relaxed
2	2	4	5	5	4	3	2	4	2	4	Like thinking	Does not like thinking
3	2	5	5	5	3	4	2	6	1	4	Good at teaching	Not good at teaching
4	2	5	5	5	3	4	2	6	1	4	Good at teaching	Not good at teaching
5	2	5	5	6	5	3	4	5	2	6	Care for others	Self-centered
6	1	2	2	3	6	4	3	4	2	5	Stubborn	Easygoing
7	1	3	4	4	2	5	4	5	5	3	Patient	Irritable
8	1	4	4	4	2	4	4	5	2	4	Open to advice	Hold on to one's own view
9	1	5	6	6	5	3	2	5	1	6	A good leader	A follower
10	5	2	2	2	1	3	4	2	4	2	Introverted	Expressive
11	1	4	4	5	5	5	3	5	4	5	Understand oneself	Does not understand oneself
12	4	4	5	5	3	4	3	4	5	4	High resilience	Low resilience

Fig. 3 Line graph showing the mental representation of different roles for Case 67

elements in the psychological space of the informant based on the first factor of the principal components analyses are presented in Fig. 4. In the line graph, the findings clearly suggested that the perceived selves of the informant before and after joining the Project P.A.T.H.S. were very different, and these two elements occupied different poles. While the informant perceived herself to be very close to a loser before joining the program, she began to identify herself with the ideal self and a mature peer after joining the program.

Exemplary Case 5 (Informant No. 53)

The informant perceived herself to have the following qualities before joining the Project P.A.T.H.S. (Element 1): immature, easygoing, unhelpful, impulsive, slack, polite, muddle through, honest, calm, and tolerant (see Table 5). However, the informant perceived herself to have the following characteristics after joining the Project P.A.T.H.S.: mature, easygoing, unhelpful, prudent, serious, polite, strive for perfection, honest, calm, and tolerant. The perceptions of different elements in the psychological space of the informant based on the first factor of the principal components analyses are presented in Fig. 5. In the line graph, the findings clearly suggested that the perceived selves of the informant before and after joining the Project P.A.T.H.S. were very different and the positive changes after joining the program were remarkable. While the informant perceived herself to be very close to a loser before joining the program, she identified herself with the ideal self, a successful person and a mature peer (but not with a loser) after joining the program.

Table 4 Raw grid form for Case No. 11

	1. Self before joining the Project P.A.T.H.S. (past self)	2. Self after joining the Project P.A.T.H.S. (present self)	3. Self at high school graduation (future self)	4. Ideal self	5. Father	6. Mother	7. An important friend	8. A successful person	9. A loser	10. A mature peer	Construct pole 6 5 4	Contrast pole 3 2 1
1	2	5	5	5	3	6	6	6	2	4	Diligent	Lazy
2	4	5	5	5	3	3	5	5	5	6	Open-minded	Conservative-minded
3	4	5	5	6	4	6	5	6	2	5	Positive	Negative
4	4	5	5	5	3	3	5	5	5	6	Open-minded	Conservative-minded
5	6	5	5	5	4	4	6	5	4	3	Optimistic	Pessimistic
6	4	5	5	6	4	6	5	6	2	5	Positive	Negative
7	4	5	5	5	3	3	5	5	5	6	Open-minded	Conservative-minded
8	2	5	5	5	3	6	6	6	2	4	Diligent	Lazy
9	3	4	4	5	4	5	6	6	3	3	Strong analytical ability	Weak analytical ability
10	4	5	5	6	4	6	5	6	2	5	Positive	Negative
11	4	5	5	6	4	6	5	6	4	5	Understand oneself	Do not understand oneself
12	3	5	5	6	4	5	6	6	4	5	High resilience	Low resilience

Lazy   Diligent
Conservative-minded   Open-minded
Weak analytical ability   Strong analytical ability

Element 1 = Self before joining the Project P.A.T.H.S   Element 6 = Mother
Element 2 = Self after joining the Project P.A.T.H.S   Element 7 = An important friend
Element 3 = Self at high school graduation   Element 8 = A successful person
Element 4 = Ideal self   Element 9 = A loser
Element 5 = Father   Element 10 = A mature peer

Fig. 4 Line graph showing the mental representation of different roles for Case 11

Exemplary Case 6 (Informant No. 82)

The informant perceived herself to have the following qualities before joining the Project P.A.T.H.S. (Element 1): calm, sentimental, treasure relationships, strong morality, sincere, willful, gentle, selfless, and considerate (see Table 6). While the positive attributes were found in the self after joining the program, the extent was generally stronger. The perceptions of different elements in the psychological space of the informant based on the first factor of the principal components analyses are presented in Fig. 6. In the line graph, the findings clearly suggested that the perceived selves of the informant before and after joining the Project P.A.T.H.S. were different and there were positive changes after joining the program. Basically, the self after joining the program was closer to the ideal self, a successful person, and a mature peer.

Discussion

Utilizing the personal construct theory, evaluation findings based on the repertory grid tests (RGT) administered to 104 informants clearly revealed the beneficial effects of the Project P.A.T.H.S. With reference to the distances between elements, the four hypotheses were supported, and the significant findings were of strong effect size. Compared with the self before joining the program, the self after joining the project was seen to be closer to the ideal self, a successful person, and a mature peer, but farther away from a loser. There are several strengths in evaluation based on the repertory grid tests. First, it can generate a "dynamic" picture of the changes

Table 5 Raw grid form for Case No. 53

	1. Self before joining the Project P.A.T.H.S. (past self)	2. Self after joining the Project P.A.T.H.S. for 3 years (present self)	3. Self at high school graduation (future self)	4. Ideal self	5. Father	6. Mother	7. An important friend	8. A successful person	9. A loser	10. A mature peer	Construct pole (6 5 4)	Contrast pole (3 2 1)
1	1	4	5	5	5	6	5	4	1	5	Mature	Immature
2	4	5	4	4	2	5	5	6	4	5	Easygoing	Stern
3	4	4	2	2	2	3	3	1	6	3	Unhelpful	Helpful
4	3	5	5	5	5	6	3	4	1	4	Prudent	Impulsive
5	2	4	5	4	4	6	4	5	1	6	Serious	Slack
6	5	6	6	6	4	5	4	5	1	5	Polite	Impolite
7	3	4	5	5	4	6	3	5	2	5	Strive for perfection	Muddle through
8	4	5	5	5	5	5	4	5	2	4	Honest	Hypocritical
9	4	5	5	5	3	6	2	3	1	5	Calm	Emotional
10	4	5	5	5	4	5	3	5	1	5	Tolerant	Intolerant
11	3	5	6	6	4	5	4	5	3	5	Understand oneself	Do not understand oneself
12	3	4	5	5	4	5	5	5	2	5	High resilience	Low resilience

Mature   Immature
Prudent   Impulsive
Serious   Slack

Element 1 = Self before joining the Project P.A.T.H.S   Element 6 = Mother
Element 2 = Self after joining the Project P.A.T.H.S   Element 7 = An important friend
Element 3 = Self at high school graduation   Element 8 = A successful person
Element 4 = Ideal self   Element 9 = A loser
Element 5 = Father   Element 10 = A mature peer

Fig. 5 Line graph showing the mental representation of different roles for Case 53

in different role figures over time. Second, it enriches our understanding of the psychological space of the informants, particularly with respect to the linkages between the elements and constructs. Third, unlike questionnaires and other qualitative methods, it is very difficult for the informants to guess the purposes of RGT. Hence, the disguised assessment nature of RGT can help to assess the psychological space of the informants in an indirect but objective manner. Generally speaking, the present study echoes the findings reported in Shek (2012a) based on both elicited and supplied constructs. In a broader context, the present findings are consistent with other evaluation findings which suggest that the Project P.A.T.H.S. is able to promote the holistic development of the program participants.

Because the repertory grid techniques have rarely been used in the evaluation of positive youth development programs in the international and Chinese contexts, the present attempt is a pioneering effort in the literature. In particular, several features make this study impressive. First, a large sample was employed to look at changes in the self-identity system of the informants. Second, as the participants were randomly selected, generalizability of the findings can be enhanced. Third, both quantitative and qualitative data were used to demonstrate the effectiveness of RGT. Fourth, this is the first known scientific study utilizing the repertory grid technique in different Chinese societies.

The present study clearly underscores the utility of using the RGT to assess changes in the program participants. A review of the literature shows that there are several applications of the RGT in different settings and the first one is to understand different viewpoints. In the clinical field, clinicians often use RGT to understand the views of the clients (Borell et al., 2003; Leach, Freshwater, Aldridge, & Sunderland, 2001), such as people with affective disorders (Böker et al., 2000) and eating disorders (Feixas et al., 2010). In the educational field, RGT has been used to

Table 6 Raw grid form for Case No. 82

	1. Self before joining the Project P.A.T.H.S. (past self)	2. Self after joining the Project P.A.T.H.S. for 3 years (present self)	3. Self at high school graduation (future self)	4. Ideal self	5. Father	6. Mother	7. An important friend	8. A successful person	9. A loser	10. A mature peer	Construct pole				Contrast pole		
											6	5	4	3	2	1
1	3	2	2	2	5	5	3	1	4	2	Impulsive			Calm		
2	3	2	2	4	5	4	6	6	4	3	Rational			Sentimental		
3	4	5	5	5	2	2	4	6	3	5	Calm			Impulsive		
4	4	5	5	5	2	4	4	4	2	5	Treasure relationships			Do not treasure relationships		
5	4	5	5	5	2	3	5	5	1	5	Strong morality			Weak morality		
6	5	5	4	5	3	4	4	4	1	5	Sincere			Insincere		
7	3	4	5	5	4	2	5	5	2	4	Not willful			Willful		
8	2	3	3	2	5	5	4	3	5	4	Unyielding			Gentle		
9	4	5	4	5	3	3	3	4	2	5	Selfless			Selfish		
10	4	5	5	5	3	2	5	5	1	5	Considerate			Inconsiderate		
11	2	4	5	6	5	5	5	5	4	5	Understand oneself			Do not understand oneself		
12	2	4	5	6	3	2	5	5	2	4	High resilience			Low resilience		

Calm	Impulsive
Strong morality	Weak morality
Considerate	Inconsiderate

Element 1 = Self before joining the Project P.A.T.H.S   Element 6 = Mother
Element 2 = Self after joining the Project P.A.T.H.S   Element 7 = An important friend
Element 3 = Self at high school graduation   Element 8 = A successful person
Element 4 = Ideal self   Element 9 = A loser
Element 5 = Father   Element 10 = A mature peer
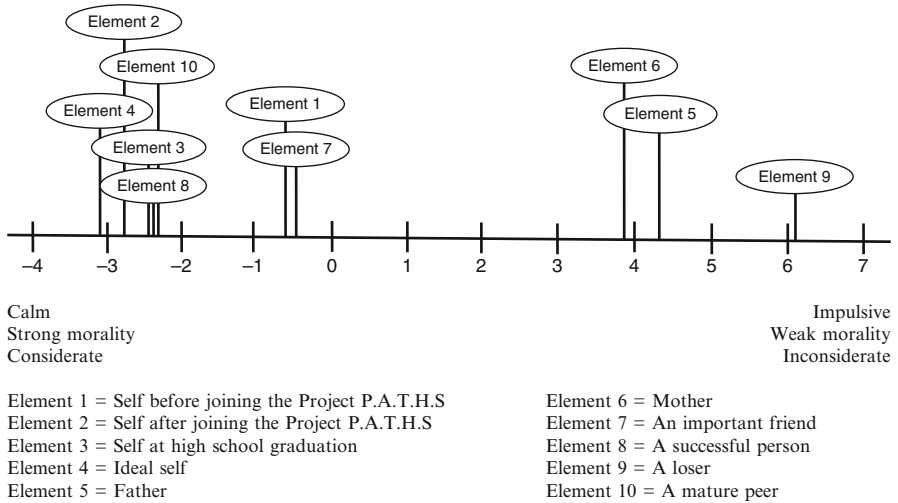
Fig. 6 Line graph showing the mental representation of different roles for Case 82

understand the process of teaching and learning, such as beliefs about teaching methods (Castejón & Martínez, 2001) and attitudes toward computer (Oosterwegel, Littleton, & Light, 2004). In business and organizational settings, König, Jöri, and Knüsel (2011) used RGT to examine how human resource practitioners perceive various methods for personnel selection. Pike (2011) identified common attributes for short-break tour destinations.

The second application of RGT is to evaluate intervention effectiveness such as understanding changes in the program participants. RGT outperforms pre-posttest using survey to understand changes because it can go beyond ratings to reach the individual changes due to reconstruction of the concept (Cornelius, 2003; Fournier & Payne, 1994), hence giving a more dynamic picture of the program effects. For example, in their study of the effectiveness of personal construct psychotherapy for deliberate self-harm, Winter et al. (2007) found that clients receiving personal construct psychotherapy showed greater improvement in terms of reconstructing positive selves than those in the control group using usual intervention methods. Truneckova and Viney (2007) also used RGT to trace the personal constructs changes of troubled adolescents who joined a group-work intervention. Unfortunately, it is noteworthy that evaluation study using RGT in non-clinical settings is rare, with notable exception in a few studies. RGT was used to assess the changes of school psychology trainees' construction of the consultant role following mentorship (Salmon & Fenning, 1993) and a 9-month consultation practicum (Salmon, 1993), respectively. A similar approach in evaluating the effectiveness of seminar in promoting students' cognitive complexity can be seen in Lõpez and Gallifa's (2008) study.

While the pioneer nature of this study should be recognized, there are also several limitations in the study. First, although a representative sample was used in this study, replication of the findings is necessary. In particular, it would be exciting to look at the prolonged changes in a person over time as well as the reasons why there was a lack of significant changes in the informants. Second, as only retrospective data were collected, it would be helpful if data regarding the helpfulness of the program can be collected in real-life contexts. Third, because there was no comparison group in the study, the interpretation that the program led to positive changes in the participants is not definitive. Fourth, although sufficient training was carried out for the test administrators, it is noteworthy that the quality of findings is strongly associated with the experience of practitioners, which probably limits the utilization of RGT. Despite these limitations, the present study showed that the selves before and after the program were different and the findings lend support to the effectiveness of the Tier 1 Program of the Project P.A.T.H.S. in Hong Kong.

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Process Evaluation of the Project P.A.T.H.S. in Hong Kong

Ben M.F. Law and Daniel T.L. Shek

Introduction

Social services in Hong Kong have focused on the needs of young people since the 1960s. In the past few decades, the common ideology of youth work intervention has portrayed that young people are too energetic and impulsive. Young people are also susceptible to various problems, including mental health problems, psychotropic substance abuse, adolescent suicide, and school violence (Shek, 2006a, 2006b). Therefore, relevant youth services are required to manage problems that arise from the developmental characteristics of the youth. Under this paradigm, the ultimate goal of intervention is to create "problem-free" youth. We have witnessed various problems from different youth cohorts. For example, we witnessed the problem of street gangs a few decades ago; nowadays, we have Internet addiction and substance abuse. Information generated from one youth problem is not entirely transferrable to another because knowledge on youth intervention is fragmented and incomplete. We have to forgo old knowledge and develop another set of practical knowledge once the context changes.

However, the adoption of the "problem-free" youth ideology cannot promote optimal human development. If a person is not unhappy, it does not imply that he or she is happy. The youth should be provided with adequate opportunities to develop

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their own potentials, interests, competencies, and commitment into adulthood by expanding their cognitive, social, and emotional capabilities. Thus, the concept of positive youth development is proposed (Steinberg, 2011). Scholars of positive youth development argue that helping young people reach their full potential is the most effective way to prevent risky behavior. Apart from focusing on the ever-changing nature of problems, positive youth development fully cultivates a person to combat threats and hazards. The hallmark of positive youth development is the unique abilities and strengths of adolescents in every developmental stage. These strengths and abilities are not "inadequate," "undeveloped," and "susceptible only to negative social influence and personal impulses" (Steinberg, 2011).

Interventions for youth problems are mainly related to counseling and remedial programs. By contrast, positive youth development relies more on structured development programs, formal mentoring, volunteer services, and context-relevant programs for particular youths in different cultures and settings.

P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme is a pioneer positive youth development program in Hong Kong (Shek, Ma, & Merrick, 2007). This project has two tiers. For the Tier 1 Program, academics are invited from local tertiary academia (including scholars from social work, education, and health science) to form a curriculum team for the development of structured youth development program units for Secondary 1–3 (i.e., Grades 7–9) students. The Tier 2 Program, which is developed by professionals, is for adolescents requiring more guidance. The Tier 1 Program units are designed to promote youth development with regard to 15 adolescent developmental constructs derived from developmental and ecological perspectives (Shek, 2006b; Shek & Lee, 2008): promotion of bonding, spirituality, prosocial norms, belief in the future; promotion of social, emotional, cognitive, behavioral, and moral competence; cultivation of resilience; self-determination; development of self-efficacy a clear and positive identity; and recognition of positive behavior and opportunities for prosocial involvement. All units in the Tier 1 Program are designed to be implemented in a classroom setting in Hong Kong. Considering that virtues are most effectively learned through personal experience, reflection, and devotion, units in the Tier 1 Program are not one-way pedagogies. These units are conveyed through activity, reflection, flash games, discussions, storytelling, sharing, role-playing, and problem solving.

Process Evaluation in Prevention Science

Program evaluation in public health and social work intervention programs involves the systematic assessment of program delivery in terms of processes and outcomes (Zakrzewski, Steven, & Ricketts, 2009). Program evaluation includes both outcome and process evaluation. Outcome evaluation focuses on program influence, whereas process evaluation involves "the use of empirical data to assess the delivery of programs…Process evaluation verifies what the program is, and whether or not it

is delivered as intended to the targeted recipients and in the intended dosage" (Scheirer, 1994, p. 40). Process evaluation validates both program process and program adherence. Program process refers to the actual delivery of the program, including implementer–participant interaction and reflection. Program adherence refers to the gaps between program design and actual delivery. Given that program evaluation focuses on program process and adherence, the importance of process evaluation stems from these two domains (Bliss & Emshoff, 2002). In literature on positive youth development, factors contingent on implementation quality and success have not been adequately examined (Domitrovich & Greenberg, 2000; Linnan & Steckler, 2002).

Process evaluation is conducted for five main reasons: provision of evidence for the relationship between intervention and outcomes, gathering of information for program contexts (e.g., Secondary 1 to 3 programs) and processes, provision of evidence for project administrators and school management on the quality of implementation, refinement of delivery components on the basis of process evaluation, and provision of more information and better understanding of programs for sponsors, the public, students, and funders. Process evaluation serves as a yardstick of accountability.

Different process evaluation indicators have been developed according to program characteristics and needs (e.g., Yamada, Stevens, Sidani, Watt-Watson, & de Silva, 2009). Process indicators, including the interaction between program implementer and receivers, engagement of program participants, feedback of program implementers (such as for goal attainment or background knowledge), familiarity of the program implementer with program receivers, and program preparation of the implementer, should be directly observed.

For program adherence, absolute program fidelity is not easily achieved because program implementers often change or adapt the content of the program during actual implementation intentionally or otherwise. A number of preventive programs do not entirely follow the prescribed program content (Nation et al., 2003; Wegner, Flisher, Caldwell, Vergnani, & Smith, 2008) but rather alter the content whether planned or unplanned, expected or unexpected. Although the given issue is not easily resolved, program fidelity is generally encouraged, particularly when programs are designed with vigorous trial runs and repeated success rates (Griffin et al., 2010). When the program has to be modified, the starting point is the program manual instead of on-site real-time program delivery.

Given this background, process evaluation in terms of program fidelity is conducted for four reasons: determination of the extent of program implementation according to the program manual, assessment and documentation of the degree of fidelity and variability in program implementation (whether expected or unexpected, planned or unplanned) with reference to a particular group of implementers (e.g., teachers or social workers) and particular groups of students, comparison of program fidelity in multiple sites, and verification of the influence of program fidelity on program quality and success.

Process evaluation has been gaining considerable attention and has been widely adopted in prevention science, such as nursing care (Huryk, 2010), chronic illness

prevention programs (Karwalajtys et al., 2009), smoking cessation programs (Gnich, Sheehy, Amos, Bitel, & Platt, 2008), dietary programs (Hart et al., 2009), and AIDS rehabilitation programs (Hargreaves et al., 2010; Mukoma et al., 2009). Unfortunately, very few process evaluation studies have been conducted in social work. A search of the Social Work Abstracts database in December 2012 with "process evaluation" as the search term revealed fewer than 50 citations.

The following program attributes can affect the quality and success of a positive youth development program (Collaborative for Academic, Social, and Emotional Learning, 2012; Nation et al., 2003; Ringwalt et al., 2003). First, students should be interested in the programs (*student interest*). Second, the programs should involve students. Interactive learning is most effective with active participation (*active student involvement*). Third, the implementer should remember that classroom management is necessary for effective learning. Students should conform to the rules set by implementers (*classroom management*). Fourth, delivery should be interactive rather than didactic (*interactive delivery*). Fifth, the learning motivation of students should be enhanced through various strategies, such as engagement of students with structured exercises, enhancement of student autonomy, and provision of a satisfactory reward system (*student motivation*). Sixth, implementers should continuously provide constructive, meaningful, and encouraging feedback to enhance student engagement (*positive feedback*). Seventh, with all other things being equal, a higher degree of familiarity with students can have a positive effect on student learning outcomes (*student familiarity*). Eighth, a positive youth development program requires active reflection from students for the adoption of learning to real-life situations and the promotion of meaningful psychosocial development (*reflective learning*). Ninth, implementers should strive to achieve program goals whenever possible during program delivery (*program goal attainment*). Tenth, efficient time management guarantees program adherence; premature program termination signifies inadequate program adherence (*time management*). Finally, the extent of familiarity of program implementers with program materials can also be observed (*implementer familiarity with program materials*).

Process Evaluation of the Project P.A.T.H.S

The Project P.A.T.H.S. has already garnered sufficient evidence for the effectiveness of the Tier 1 Program, including evaluation findings on the basis of randomized group trials (e.g., Shek & Ma, 2012; Shek & Yu, 2011) and subjective outcome evaluations (e.g., Shek & Sun, 2007) as well as qualitative findings on the basis of focus group interviews with program implementers and students (e.g., Shek, 2012; Shek & Sun, 2012b, 2012c), interim evaluations (e.g., Shek, Sun, & Siu, 2008; Shek & Yu, 2012a), analyses of student weekly diaries (e.g., Shek & Sun, 2012a; Shek, Sun, Lam, Lung, & Lo, 2008), case studies (e.g., Shek & Sun, 2008), and longitudinal studies (Shek & Ma, 2012; Shek & Yu, 2012b). Evaluation findings based on various evaluation strategies indicate that the Project P.A.T.H.S. promotes the development of participants.

Process evaluation has been conducted in different phases of the Project P.A.T.H.S. for Secondary 1 (Shek, Ma, Sun, & Lung, 2008), Secondary 2 (Shek, Lee, & Sun, 2008), and Secondary 3 levels (Law & Shek, 2011). Based on data from 97 classroom-based teaching units in 62 schools from 2005 to 2009, Law and Shek (2012) used the Process Evaluation Checklist (PEC) in Chinese with 11 items, including student interest, student participation and involvement, classroom control, use of interactive delivery, use of student motivation strategies, use of positive and supportive feedback, familiarity of instructor with students, opportunity for reflection, degree of achievement of objectives, time management, and preparation quality, to assess process implementation quality. Overall program adherence and implementation quality were high. Moreover, program adherence and implementation predicted the quality and success of the program.

Although the study of Law and Shek (2012) provided a comprehensive view of the quality of the program implementation process, several gaps exist. First, the variations of implementation quality are unclear in terms of different program characteristics, including grades (Secondary 1–3), curriculum integration modes (formal curriculum, outside formal curriculum, and other arrangements), and implementers (teachers, social workers, and teachers with social workers). Second, the factor structure of the PEC is unclear. Third, the relationship of program adherence and process indicators with the implementation quality and success of the Tier 1 Program is vague.

Given this background, four research questions were asked in this study:

1. What is the implementation status (implementation process, program adherence, and curriculum quality and success) of the Tier 1 Program of the Project P.A.T.H.S.?
2. Does implementation quality vary with grade (Secondary 1 to Secondary 3), curriculum integration mode (formal curriculum, outside formal curriculum, and other arrangements), and implementer (teachers, social workers, and teachers with social workers)?
3. Is the PEC a unidimensional construct?
4. What is the relationship of program adherence and process indicators with the implementation quality and success of the Tier 1 Program? According to the previous discussion, program adherence and process indicators are hypothesized to be associated with program implementation quality and program success.

Method

Participants and Procedures

The total number of schools that participated in the Project P.A.T.H.S. from 2005 to 2009 was 244. Among these schools, 46.27 % adopted the full program (i.e., 20-h program involving 40 units), whereas 53.73 % adopted the core program (i.e., 10-h program involving 20 units).

A total of 62 schools were randomly selected to participate in the process evaluation study (23 schools for Secondary 1, 21 schools for Secondary 2, and 18 schools for Secondary 3) from 2005 to 2009. Roughly one-fourth of participating schools adopted the core program (25.08 %), whereas the remaining 74.2 % adopted the full program. Approximately 65 % of schools incorporated the program into their formal curriculum (e.g., liberal studies, life education, and religious studies), 27.42 % used the class period to implement the program, and less than 8 % used the other modes. The average number of students in the participating schools was 33.91. The characteristics of the schools that participated in our process evaluation study are shown in Table 1.

Process evaluation was conducted by systematically observing actual program delivery in classrooms of one to two teaching units on a voluntary basis. Informed verbal consent was obtained from participating schools, which joined the study on a voluntary basis. Two trained research assistants of the project were employed as observers. Before conducting the observational study, the observers were trained to standardize the data collection procedure and classroom observation ratings to ensure data quality and consistency. During the observation, each observer observed how units were implemented and completed an observation form. The observers were not allowed to converse with each other during the observation process and were "blind" to the observation ratings of their partner. Data obtained from completed rating forms were then analyzed.

Instruments

Process Evaluation Checklist (PEC)

The PEC consists of 11 items. Observers were requested to report their observations by using a seven-point Likert scale from one (*extremely negative*) to seven (*extremely positive*). A higher score represents higher teaching process quality and higher teaching context quality. The items of the PEC are shown in Table 2. The overall internal consistency of the PEC was high (Cronbach's alpha = .93). Inter-rater reliability of the PEC ratings, as shown by the Pearson correlation, was .72 ($p < .001$); this value was very satisfactory.

Program Adherence

Observers were requested to rate program adherence in terms of the percentage of correspondence between actual program delivery and stipulated program materials. Analyses by Pearson correlation showed that program adherence ratings were highly reliable ($r = .84$, $p < .001$) between raters, thus indicating a very high level of inter-rater reliability.

Table 1 Descriptive profile of participating schools from 2005 to 2009

	S1			S2			S3	
	2005–2006 (EIP-S1)	2006–2007 (FIP-S1)	2008–2009 (FIP-S1)	2006–2007 (EIP-S2)	2007–2008 (FIP-S2)	2008–2009 (FIP-S2)	2007–2008 (EIP-S3)	2008–2009 (FIP-S3)
Total schools joined P.A.T.H.S.	52	207	197	49	196	198	48	167
(i) 10-h program	23	95	103	28	116	109	31	104
(ii) 20-h program	29	112	94	21	80	89	17	63
Total schools joined this study	6	14	3	4	14	3	4	14
(i) 10-h program	1	5	0	0	5	0	0	5
(ii) 20-h program	5	9	3	4	9	3	4	9
Background characteristics of participating schools								
Location (district)								
Hong Kong and Islands	1	2	1	1	2	1	1	4
Kowloon	0	7	1	2	2	1	1	4
N.T.	5	5	1	1	10	1	2	6
Finance mode								
Aided	6	11	3	3	10	3	4	13
Direct subsidy scheme	0	2	0	1	1	0	0	0
Government	0	1	0	0	3	0	0	1
Sex composition								
Co-ed	6	11	3	4	13	3	4	11
Unisex	0	3	0	0	1	0	0	3
Religious background								
Christianity/Catholic	2	7	2	2	7	1	0	8
Buddhism/Taoism	0	3	0	0	2	0	2	3
Islamism	0	0	1	1	0	0	0	0
Nil	4	4	0	1	5	2	2	3

(continued)

Table 1 (continued)

	S1			S2			S3	
	2005–2006 (EIP-S1)	2006–2007 (FIP-S1)	2008–2009 (FIP-S1)	2006–2007 (EIP-S2)	2007–2008 (FIP-S2)	2008–2009 (FIP-S2)	2007–2008 (EIP-S3)	2008–2009 (FIP-S3)
Integration into school curriculum								
Formal curriculum (e.g., liberal studies, religious studies, life education)	3	12	2	3	7	2	3	8
Class teachers' session	1	2	1	1	7	1	1	4
Others	2	0	0	0	0	0	0	2
Average no. of students in the class	35.2	36.7	30	34.3	34.5	29.7	35.8	35.1
Program implementers								
Social worker	1	2	1	0	5	0	3	2
Teacher	1	6	1	1	7	2	0	6
Social worker+teacher	4	6	1	3	2	1	1	6
Total no. of units observed	12	22	3	7	21	5	7	20

Note: EIP experimental implementation phase, *FIP* full implementation phase

Table 2 Descriptive statistics of process indicators, quality and success

Evaluation items	Frequency (%)							Min	Max	*M*	SD
	1	2	3	4	5	6	7				
Interest	0	0	3.1	8.3	28.8	50.5	9.3	3.0	7.0	5.35	.84
Involve	0	0	0	8.2	18.5	58.8	14.4	4.0	7.0	5.58	.78
Class	0	0	2.1	5.2	20.6	52.6	19.6	3.0	7.0	5.62	.82
Interact	0	0	2.0	10.3	35.1	43.3	8.2	3.0	7.0	5.27	.84
Motivation	0	0	2.1	15.5	32.0	43.3	7.1	3.0	7.0	5.19	.82
Feedback	0	0	3.1	14.4	43.3	32.0	7.2	3.0	7.0	5.03	.89
FStudents	0	0	4.1	7.2	29.9	36.1	22.7	3.0	7.0	5.43	1.00
Reflect	0	0	5.2	15.4	23.7	44.0	19.6	3.0	7.0	4.96	.91
Goal	0	1.0	2.0	7.2	29.9	51.6	8.2	2.0	7.0	5.35	.87
Time	0	0	6.2	14.4	43.3	27.8	8.2	3.0	7.0	5.01	.96
FMaterials	0	0	2.0	5.2	27.8	48.4	16.5	3.0	7.0	5.52	.80
Quality	0	1.0	1.0	10.3	31.9	46.4	9.3	2.0	7.0	5.32	.86
Success	0	0	1.0	8.3	36.1	46.4	8.2	3.0	7.0	5.34	.77

Note: Interest=student interest, Involve=active involvement of students, Class=classroom management, Interact=interactive delivery method, Motivation=strategies to enhance the motivation of students, Feedback=positive feedback, FStudents=familiarity of implementers with students, Reflect=reflective learning, Goal=program goal attainment, Time=time management, FMaterials= familiarity of program implementers with the program materials, Quality=implementation quality, Success=implementation success

Process Outcome

Two items were used to evaluate the observation outcome: implementation quality and implementation success (last two items in Table 2). Observers were requested to indicate their observations by using a seven-point Likert scale from one (*poor*) to seven (*excellent*). A higher score represents better implementation quality or success. Inter-rater reliability for implementation quality, as shown by the Pearson correlation, was .74 ($p<.001$), whereas that for implementation success was .64 ($p<.001$). Both inter-rater reliability values were very satisfactory.

Results

Considering that the inter-rater reliabilities of the scores were high, the ratings of each item from the two independent observers were averaged across all units. First, a descriptive profile of all items was presented. Second, differences in scores in terms of grades, implementers, and curriculum integration were computed by using ANOVA. Third, correlations between items were examined. Fourth, the factor structure of the PEC was explored. Finally, hierarchical multiple regression of factors and program adherence was conducted to predict program implementation quality and success.

Table 3 Descriptive statistics of program adherence

Degree of program adherence	Frequency
0–10 %	0 %
11–20 %	1.0 %
21–30 %	0 %
31–40 %	1.0 %
41–50 %	3.1 %
51–60 %	3.1 %
61–70 %	6.2 %
71–80 %	16.5 %
81–90 %	28.9 %
91–100 %	40.1 %
Summary	

Minimum degree of program adherence	Maximum degree of program adherence	Mean degree of program adherence	SD
13 %	100 %	85.14 %	15.5 %

Tables 2 and 3 show the descriptive profiles of the evaluation indicators. Adherence to the established program manual ranged from 13.0 to 100 %, with an average overall adherence of 85.14 %. The scores for implementation quality and success were 5.32 (SD = .86) and 5.34 (SD = .77), respectively, which were satisfactory. The scores for all evaluation indicators ranged from 4.96 to 5.62, which were also satisfactory. The highest scores went to classroom management (5.62) and student familiarity (5.43). The lowest scores went to reflective learning (4.96) and time management (5.01).

Table 4 shows the differences between different grades. Among the teaching units, 37 (38.1 %) were Secondary 1 units, 33 (34.0 %) were Secondary 2 units, and 27 (27.8 %) were Secondary 3 units. Analyses showed grade differences in implementation quality. For interaction, goal attainment, and implementation quality, the mean rating was higher in Secondary 1 than in Secondary 3. Moreover, implementation success for Secondary 1 was higher than that of Secondary 3, and the success of Secondary 2 was also higher than that of Secondary 3.

Differences according to program implementers were also examined. Among the teaching units, 33 (34.0 %) were conducted by teachers, 24 (24.7 %) by social workers, and 39 (41.2 %) by both teachers and social workers. Table 5 shows that only student familiarity and the overall process indicators of PEC varied. Post hoc least significance difference (LSD) analysis showed that the highest score for familiarity with students belonged to teachers followed by teachers with social workers and social workers only. In addition, the scores of teachers for classroom management and implementation quality and the mean score of all process indicators were higher than those of social workers.

Differences in program implementation quality in terms of curriculum integration were computed. Curriculum integration has three types: formal curriculum, outside formal curriculum, and hybrid mode. Among the teaching units, 56 (57.7 %) were

Table 4 Item scores by different grades

	Grade						
	Secondary 1		Secondary 2		Secondary 3		
Items	M	SD	M	SD	M	SD	F
Interest	5.53	.77	5.33	.77	5.11	.96	1.97
Involve	5.68	.67	5.61	.83	5.41	.86	.96
Class	5.62	.82	5.62	.91	5.61	.74	.00
Interact	5.49	.79	5.33	.75	4.91	.93	4.07* (B)
Motivation	5.26	.82	5.12	.73	5.17	.93	.25
Feedback	5.00	.99	5.09	.79	5.00	.90	.11
FStudents	5.34	.98	5.53	1.08	5.43	.95	.32
Reflect	4.99	.95	5.15	.73	4.70	1.01	1.85
Goal	5.54	.73	5.41	.76	5.02	1.10	3.03 (B)
Time	4.89	1.06	5.36	.77	4.74	.94	3.77
FMaterials	5.65	.93	5.61	.53	5.22	.80	2.63
Quality	5.47	.79	5.50	.74	4.89	.95	5.14 (B)
Success	5.53	.68	5.45	.70	4.93	.85	5.85** (C)
Program adherence	85.47 %	13.75 %	89.17 %	8.90 %	79.76 %	21.84 %	2.86
Process (A)	5.36	.63	5.38	.56	5.11	.73	1.51

Note: Interest = student interest, Involve = active involvement of students, Class = classroom management, Interact = interactive delivery method, Motivation = strategies to enhance the motivation of students, Feedback = positive feedback, FStudents = familiarity of implementers with students, Reflect = reflective learning, Goal = program goal attainment, Time = time management, FMaterials = familiarity of program implementers with the program materials, Quality = implementation quality, Success = implementation success

A: Process is the mean of the 11 process evaluation indicators

B: Post hoc analysis shows that S.1 score is higher than S.3 score

C: Post hoc analysis shows that S.1 score is higher than S.3 score and S.2 score is higher than S.3 score

$^{**}p < .005$; $^{*}p < .05$

implemented under the formal curriculum, 25 (25.8 %) were outside of the formal curriculum, and 4 (4.1 %) were under the hybrid mode. Student interest, student involvement, goal attainment, implementation success, and the mean score of process indicators were higher for formal curriculum integration than for outside formal curriculum arrangement (Table 6). Post hoc analysis showed that student interest, student involvement, classroom management, interactive delivery, goal attainment, implementation quality and success, and the mean score of process indicators were higher for formal curriculum integration than those for outside formal curriculum integration.

Table 7 shows the correlation matrix for all items. Program adherence was not correlated with student involvement, feedback provision, and student familiarity. However, all items were highly intercorrelated with each other. According to the correlation matrix, the item with the strongest correlation with implementation quality was implementation success followed by the mean of all process indicators.

The correlation matrix showed that all process indicators were highly intercorrelated with each other. The indicators and program adherence were used to predict

Table 5 Item scores by different implementers

| | Implementer | | | | | | |
| | Teachers | | Social workers | | Social workers with teachers | | |
Items	M	SD	M	SD	M	SD	F
Interest	5.45	.82	5.15	.79	5.38	.88	.98
Involve	5.67	.81	5.48	.67	5.56	.83	.41
Class	5.85	.72	5.33	.91	5.60	.81	$2.85^*(C)$
Interact	5.35	.79	5.17	.73	5.28	.95	.32
Motivation	5.20	.75	4.98	.68	5.30	.93	1.16
Feedback	5.21	.64	4.81	.87	5.01	1.05	1.43
FStudents	6.15	.62	4.67	.96	5.29	.88	$23.66^{***}(B)$
Reflect	5.21	.86	4.71	.78	4.91	.99	2.30
Goal	5.59	.70	5.15	.70	5.28	1.05	2.11
Time	5.23	.91	4.75	1.00	4.99	.96	1.75
FMaterials	5.59	.64	5.38	.78	5.54	.92	.53
Quality	5.50	.75	5.04	.78	5.34	.96	$2.04^*(C)$
Success	5.47	.76	5.13	.63	5.35	.85	1.41
Program adherence	90.03 %	10.06 %	83.23 %	12.59 %	82.25 %	19.59 %	2.60
Process (A)	5.50	.52	5.05	.57	5.28	.72	$3.63^*(C)$

Note: Interest = student interest, Involve = active involvement of students, Class = classroom management, Interact = interactive delivery method, Motivation = strategies to enhance the motivation of students, Feedback = positive feedback, FStudents = familiarity of implementers with students, Reflect = reflective learning, Goal = program goal attainment, Time = time management, FMaterials = familiarity of program implementers with the program materials, Quality = implementation quality, Success = implementation success
A: Process is the mean of the 11 process evaluation indicators
B: Post hoc analysis shows that score of teachers is the highest, the score from both teachers and social workers is the second highest, and the score from social workers is the lowest
C: Post hoc analysis shows that the score of teachers is higher than that of social workers
$^*p<.05,\ ^{***}p<.001$

the quality and success of program implementation. To reduce the possibility of type 1 error, principal components analysis with varimax rotation was used to summarize the effects of all evaluation indicators. One factor was identified with eigenvalues greater than 1.0. The resulting scree plot of the eigenvalues also revealed that the stabilization to a straight horizontal line occurred after the first eigenvalue. This factor could explain 56.82 % of variance. Table 8 shows the component matrix of the PEC.

Thus, two variables were used to predict implementation quality and success: process and program adherence. Table 9 shows the intercorrelations between program adherence, implementation process, implementation quality, and implementation success. All variables were significantly correlated with each other. Correlations between quality and success ($r=.93$) and between process and quality ($r=.81$) were high. On the contrary, correlations between process and adherence ($r=.40$) and between quality and adherence ($r=.49$) were relatively low.

Table 6 Item scores by different curriculum integration

Items	Formal M	Formal SD	Outside M	Outside SD	Hybrid M	Hybrid SD	F
Interest	5.50	.76	4.96	.88	4.88	.85	4.55*(B)
Involve	5.68	.65	5.22	.94	5.38	.75	3.33*(B)
Class	5.72	.84	5.30	.85	5.50	.58	2.23(B)
Interact	5.32	.84	4.90	.66	5.25	.96	2.43(B)
Motivation	5.29	.83	4.94	.80	4.75	.50	2.21
Feedback	5.18	.88	5.02	.77	5.00	.00	.36
FStudents	5.55	.93	5.30	1.18	4.00	.00	.99
Reflect	5.04	.95	4.68	.71	5.00	.71	1.49
Goal	5.46	.85	4.90	.87	5.50	.58	3.85*(B)
Time	5.08	.95	4.96	.95	5.23	.96	.23
FMaterials	5.58	.82	5.24	.56	5.50	.58	1.81
Quality	5.39	.88	4.96	.76	5.50	.58	2.48 (B)
Success	5.44	.77	4.92	.75	5.25	.50	4.07*(B)
Program adherence	85.66 %	15.76 %	83.70 %	16.91 %	88.75 %	6.29 %	.23
Process (A)	5.40	.64	5.04	.58	5.18	.53	3.16*(B)

Note: Interest=student interest, Involve=active involvement of students, Class=classroom management, Interact=interactive delivery method, Motivation=strategies to enhance the motivation of students, Feedback=positive feedback, FStudents=familiarity of implementers with students, Reflect=reflective learning, Goal=program goal attainment, Time=time management, FMaterials= familiarity of program implementers with the program materials, Quality=implementation quality, Success=implementation success

A: Process is the mean of the 11 process evaluation indicators

B: Post hoc analysis shows that formal curriculum integration is higher than outside formal curriculum integration

$^*p < .05$

In further hierarchical multiple regression analyses, program adherence and implementation process were entered as predictors, and implementation quality and implementation success were used as two separate dependent variables. Implementers and curriculum integration were controlled because of their effect on process indicators. Table 10 shows the results. After Step 1, with the implementer and formal curriculum, the variances explained were .03 and .07 for implementation quality and implementation success, respectively. After Step 2, with the addition of process indicators and program adherence as predictors, the variances increased to .82 and .79 for implementation quality and implementation success, respectively. The effect size scores indicated by Cohen f^2 were 4.56 and 3.76, which are extremely large.

Discussion

Based on a series of data collected from 2005 to 2009 (Law & Shek, 2012), the present study examined the process evaluation findings of the Project P.A.T.H.S. in Hong Kong. This study has several unique features. First, a large number of teaching units

Table 7 Correlation matrix of all evaluation items

	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Interest	.81***	.60***	.68***	.64***	.55***	.37***	.68***	.69***	.39***	.64***	.76***	.76***	.30**	.85***
2 Involve		.55***	.64***	.65***	.49***	.28*	.56***	.59***	.22*	.51***	.64***	.62***	.18ns	.76***
3 Class			.43***	.49***	.47***	.39***	.52***	.62***	.33**	.45***	.54***	.60***	.31**	.71***
4 Interact				.69***	.49***	.25*	.68***	.74***	.33**	.67***	.81***	.79***	.32**	.80***
5 Motivation					.71***	.24*	.60***	.62***	.29**	.55***	.65***	.61***	.26*	.78***
6 Feedback						.34**	.55***	.48***	.34***	.46***	.56***	.46***	.19ns	.72***
7 FStudents							.42***	.32**	.24*	.29*	.33**	.34**	.18ns	.52***
8 Reflect								.73***	.45***	.58***	.80***	.74***	.38***	.83***
9 Goal									.48***	.74***	.86***	.88***	.60***	.85***
10 Time										.55***	.53***	.49***	.48***	.58***
11 FMaterials											.80***	.75***	.44***	.78***
12 Quality												.93***	.49***	.89***
13 Success													.51***	.86***
14 Program adherence														.45***
15 Process (A)														

Note: Interest=student interest, Involve=active involvement of students, Class=classroom management, Interact=interactive delivery method, Motivation=strategies to enhance the motivation of students, Feedback=positive feedback, FStudents=familiarity of implementers with students, Reflect=reflective learning, Goal=program goal attainment, Time=time management, FMaterials=familiarity of program implementers with the program materials, Quality=implementation quality, Success=implementation success

*** *p*<.001; ** *p*<.005; * *p*<.05; *ns* nonsignificant

Table 8 Component matrix
of the Process Evaluation
Checklist

Items	Factor loading
Interest	.87
Involve	.78
Class	.71
Interact	.82
Motivation	.80
Feedback	.71
FStudents	.46
Reflect	.82
Goal	.86
Time	.54
FMaterials	.79

Note: Interest=student interest, Involve=active involvement of students, Class=classroom management, Interact=interactive delivery method, Motivation=strategies to enhance the motivation of students, Feedback=positive feedback, FStudents=familiarity of implementers with students, Reflect=reflective learning, Goal=program goal attainment, Time=time management, FMaterials=familiarity of program imple-menters with the program materials

Table 9 Intercorrelations
among program adherence,
implementation process,
implementation quality,
and implementation success

Measure	1	2	3	4
1. Implementation process		.40***	.81**	.79***
2. Program adherence			.49***	.51***
3. Implementation quality				.93***
4. Implementation success				

Note: Bonferroni correction was used to evaluate the significance of the correlations
***$p<.001$; **$p<.005$

and schools were evaluated. Second, two independent raters conducted the assessment. Third, a structured and reliable measure of program implementation was used. Fourth, inter-rater reliability analyses showed that the observations were reliable.

Different aspects of program delivery were perceived to be very positive, thus indicating that the Project P.A.T.H.S. was well received by both program implementers and students. Relatively lower average ratings were found on time management and reflective learning, which are similar to those findings based on the Experimental Implementation Phase (Shek, Lee, & Sun, 2008; Shek, Ma, Lui, & Lung, 2006). Education in Hong Kong is basically based on one-way pedagogy. Students are not used to reflective learning in class. For time management, all program units are developed by using a "warm-up, exercise, mini-talk, and summary" format. Many implementers have observed that warm-up exercises sometimes become filled with excitement that the class spends more time on this particular activity; consequently, the full program will not be executed.

Table 10 Hierarchical regression analyses of predictors for implementation quality and success

	Implementation quality	Implementation success
	β	
Step 1		
Implementer	−.12	−.12
Formal curriculum	−.16	−.26[*]
R^2	.03	.07
F for R^2 change	1.45	3.20[*]
Step 2		
Implementer	.08	.08
Formal curriculum	.96	−.05
Program adherence	.17[**]	.20[**]
Process indicators	.83[***]	.78[***]
R^2	.82	.79
F for R^2 change	88.00[***]	77.96[***]

[*]$p<.05$; [**]$p<.01$; [***]$p<.001$

With regard to program adherence, the overall degree of adherence to the teaching units assessed by the two observers was relatively high. This assessment implies that the manuals are basically adequate for program delivery without much adaptation. However, this implication is specific to Hong Kong adolescents.

This study also revealed that different grades, implementers, and curriculum integration modes were related to program delivery. Compared with Secondary 3 students, Secondary 1 students perceived the program to be more interactive, more successful with regard to program goals, and more superior in terms of implementation. Several factors may have contributed to the observed differences. First, the program content for Secondary 1 may be more cohort appropriate than that for Secondary 3; thus, the program may need refinement. Second, Secondary 3 students in Hong Kong focus more on studying than Secondary 1 students; thus, non-credit-bearing courses such as the Project P.A.T.H.S. may not be attractive. Third, Secondary 3 students are middle adolescents, in whom adolescent psychosocial features such as egocentrism and personal uniqueness are more common. Middle adolescents are more self-centered and are not too engaged in school-based activities. Fourth, adolescents experience more boredom at school as they grow older (Steinberg, 2011). Thus, adolescents are predicted to be less engaged in Secondary 3 than in Secondary 1.

The implementer effect contradicted our expectation. We assumed that both teachers and social workers would be equally effective as program implementers after training. However, teachers were perceived to be better implementers than social workers in classroom-based positive youth development programs. One significant difference is student familiarity. Teachers know students much better than social workers. However, familiarity with students is not a critical independent process indicator of implementation quality and success. Student familiarity is only a mediator to other process indicators. When implementers familiarize themselves

with their students, the implementation processes may occur more naturally and effectively. Students would pay more attention to the implementers and respond more actively. More importantly, students understand that relationships with teachers exist after lessons. However, students may not feel the need to build rapport with social workers when they initially enter a classroom. No consequence follows if students do not respond in class. We argue that, if provided with the same training, teachers are better implementers than social workers. The conformity of teachers to the training manual was also higher than that of social workers.

A heated debate exists on whether the Tier 1 Program units should be incorporated into the formal curriculum or if they should be implemented separately outside of the formal curriculum. This study sheds light on this question. The incorporation of the Tier 1 Program into the existing formal curriculum was most effective in terms of program implementation quality. Students were more interested and involved; goal attainment, quality, and success were also high. Students were more willing to join classroom-based activities, and any mandatory after-class activities were viewed as coercion and punishment. Student motivation for participation dropped drastically. On the contrary, when the school recognized the importance of positive youth development, students also respected the programs. One indicator of recognition is the integration of the P.A.T.H.S. lessons into the formal curriculum.

The current study showed that implementation process indicators were highly interconnected and formed a unidimensional factor. Program adherence and implementation process were critical in predicting implementation quality and success. The implementation process refers to the dynamics of classroom activities, background knowledge of students, familiarity with materials, management of time, and attainment of goals. This process emphasizes the interaction between implementers and students, which is critical for positive youth program delivery. The high degree of program adherence implies that the quality of the existing curriculum manual was generally high.

One critical contribution of the current study to prevention science is that both process indicators and program adherence are hallmarks of implementation quality and success. Various process indicators should be adopted in the training sessions of implementers. However, this study has several limitations. First, only 62 randomly selected schools participated in this study. Although the number of schools can be considered acceptable, the inclusion of a greater number of schools with different characteristics in the study is advisable. In particular, school effects may be prominent and can be examined by multilevel group analysis. Second, additional variables can be devised for the implementation process, such as the effect of different learning tasks (e.g., computer flash games) and the self-disclosure of implementers. Process indicators may become multidimensional factors when more items are included. Finally, the observation might have a confounding effect. Students may be more cooperative with visitors or outside observers because students might not want to ruin the reputation of their schools, particularly in Chinese settings (Leung & Chan, 2003); thus, students might consciously perform better. Despite these limitations, process evaluation findings suggested that the implementation quality of the Tier 1 Program was high.

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Using Different Programs to Help Adolescents with Greater Psychosocial Needs

Daniel T.L. Shek and Tak Yan Lee

Introduction

There are two tiers of programs (Tier 1 and Tier 2) in the Project P.A.T.H.S. in Hong Kong (Shek, 2006; Shek & Ma, 2006; Shek & Sun, 2009a, 2009b). The Tier 1 Program is a universal prevention initiative in which Secondary 1–3 students take part. Using a structured curriculum, there are 20 h of training in both core and elective programs in each school year for each grade. Students learn competencies based on the 15 positive youth development constructs as identified in the successful programs identified by Catalano, Berglund, Ryan, Lonczak, and Hawkins (2004).

Besides building up psychosocial competencies in adolescents via the Tier 1 Program, students with greater psychosocial needs are helped via the Tier 2 Program. Because research findings suggest that roughly one-fifth of adolescents would need more help, the Tier 2 Program is provided for at least one-fifth of the students who display greater psychosocial needs at each grade (i.e., selective prevention) by the school social work service providers. The Tier 2 Program (Selective Program) targets adolescents with greater psychosocial needs who are identified in the Tier 1 Program and/or via other sources. Students with greater psychosocial needs usually have

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special needs in the academic, personal (e.g., adjustment, mental health, and values concerns), interpersonal, and family domains. Information based on multiple sources, including objective assessment tools (e.g., Family Assessment Instrument, Life Satisfaction Scale, Hong Kong Student Information Form), teachers' ratings, student records, and other relevant quantitative and qualitative information based on systematic assessment, is used to identify students for the Tier 2 Program. Throughout the project, different evaluation studies were conducted to examine the effectiveness of the Tier 2 Program utilizing the subjective outcome evaluation approach. Overall speaking, the findings are very positive, showing that most of the participants had positive views of the program, instructors, and benefits (Lee & Shek, 2010; Lee, Shek & Sun, 2010; Shek, Lee, Sun, & Lung, 2008; Shek & Ma, 2010; Shek, Ma, & Merrick, 2010; Shek & Merrick, 2009; Shek & Sun, 2008). Besides, four major types of program were identified in the Tier 2 programs, including programs based on adventure-based counseling (ABC) approach, programs concentrated on volunteer training and services (VTS), programs incorporating both adventure-based counseling and volunteer training elements, and other programs with different foci. Previous evaluation findings generally showed that these four modes of program did not differ in their evaluation in terms of the subjective outcome evaluation.

Based on the consolidated data on the Tier 2 Program collected in the Experimental and Full Implementation Phases of the project from 2005 to 2009 (213 schools with 60,215 respondents), it was found that the participants generally had positive perceptions of the programs, program implementers, and perceived program effectiveness. It was also found that two-thirds (67.7 %) of all programs adopted the ABC approach as part of or the only program theory. However, similar to the findings based on the separate studies conducted previously, results did not show any significant difference among the four types of programs in participants' views on the program, instructors, as well as the effectiveness of the program. As the ABC approach is a very popular program theory, it is necessary to investigate if there are differences in the participants' perceptions on the program effectiveness between ABC-related and non-ABC-related programs. This chapter attempts to examine this question based on nine sets of subjective outcome evaluation data.

The Adventure-Based Counseling Approach

As far as adventure-based counseling is concerned, it is an approach which integrates adventure, wilderness, experiential learning, as well as individual and group counseling (Alvarez & Welsh, 1990; Fletcher & Hinkle, 2002; Hopkins & Putnam, 1993; Lee & Mak, 2002; Quezada & Christopherson, 2005). According to this approach, when an adolescent with a disequilibrium in personal development is put in an environment which is strange and requires cooperation (i.e., adventure environment), the tasks designed providing adventure experiences will lead to transformation in the participant, including changes in self-confidence, self-understanding, and

cooperation with others (Gass, 1993; Glass & Myers, 2001; Glass & Shoffner, 2001; Lee & Mak, 2002; Priest & Gass, 1997; Quezada & Christopherson, 2005). According to Schoel, Prouty, and Radcliffe (1988), adventure-based counseling promotes life skills in the participants, including communication, cooperation, decision-making, and problem-solving skills. With regard to the effectiveness of adventure-based counseling, Moote and Wodarski (1997) showed that 16 of the 19 studies under review reported some positive effects for the participants, including enhanced self-esteem, self-concept, cooperative behavior, and physical, social, and intellectual growth. They also concluded that "for social workers who provide direct services to adolescents in various settings, adventure-based counseling may be a viable alternative to traditional approaches" (pp. 161–162).

The Volunteer Training cum Service Approach

The second major mode of Tier 2 programs is closely related to volunteering training and services. According to Clary et al. (1998), there are six functions of volunteering. They are (a) enhanced understanding of the world through volunteering (knowledge function); (b) expression of values via volunteering (value expressive function); (c) avoidance of personal issues or undesirable truths about the self via volunteering (ego defensive function); (d) enhancement of self-esteem, competence, and mood (self-enhancement function); (e) facilitation of career and development of a better resume (utilitarian function); and (f) social companionship and socializing with other volunteers (interpersonal function). Clearly, research findings showed that volunteers perceived several benefits of volunteering, including knowledge and skills acquisition, enhancement of occupational and educational opportunities, and social belongingness among peers (Chapman & Morley, 1999; Cheung, 2006; Hansen, Larson, & Dworkin, 2003; Omoto & Snyder, 2002). Other benefits for adolescents engaging in volunteerism include reduction of anticipated distress and negative emotions (Carlo & Randall, 2002; Nelson & Crick, 1999). Based on these findings, it would be expected that volunteer training and services would promote positive youth development.

It is noteworthy that although it is very common for social work agencies to design programs for adolescents with greater psychosocial needs (e.g., adventure-based counseling, volunteer training program), systematic evaluation and documentation of program evaluation have rarely been found in the local social work literature (Shek, Lam, & Tsoi, 2003). Although recent studies provide solid evidence to support the effectiveness of the Tier 2 Program (Shek & Lee, 2012; Shek & Sun, 2010), an examination of the possible differences in the perceived outcomes among different modes of program is worth noting. Against this background, this chapter examines whether participants joining the ABC-related and non-ABC-related programs differ in their evaluation of the program. Obviously, this examination will stimulate discussion on the choice of program theory in future secondary prevention programs for at-risk adolescents. Besides, predictors of subjective outcome evaluation in the Tier 2 Program are also explored.

Methods

Participants and Procedures

From 2005 to 2009, a total of 93,001 participants (48,212 at the Secondary 1 level, 29,644 at the Secondary 2 level, and 15,145 at the Secondary 3 level) joined the Tier 2 Program across 4 years, where 83,378 were student participants who had greater psychosocial needs and 9,623 were their parents and teachers. The basic characteristics of the participants in the different datasets can be seen in Table 1.

The first author has developed a Subjective Outcome Evaluation Form for Participants (Form C, Shek & Lee, 2012). Participants were invited to respond to the Form C after completing the Tier 2 Program. From 2005 to 2009, a total of 60,215 questionnaires were collected (mean = 43.74 participants per school, range from 3 to 222) with an overall response rate at 64.75 %. To facilitate the program evaluation, the Research Team has developed an evaluation manual with standardized instructions for collecting the subjective outcome evaluation data. In addition, the program implementers had received adequate training in a 20-h training workshop on how to collect and analyze the data collected by Form C. The participants were invited to respond to Form C after completion of the program.

Instruments

The Subjective Outcome Evaluation Form (Form C) was used to measure the participants' perceptions of the Tier 2 Program, including the program, instructor, and effectiveness. For the quantitative data, the implementers collecting the data were requested to input the data in an Excel file developed by the Research Team which would automatically compute the frequencies and percentages associated with the different ratings for an item. When the schools submitted the reports, they were also requested to submit the soft copy of the consolidated data sheets. After receiving the consolidated data from the funding body, the data were aggregated to "reconstruct" the overall profile based on the subjective outcome evaluation data by the Research Team. Only quantitative data based on the rating scale items were examined in this study.

Results

The basic characteristics of the Tier 2 Program implemented from 2005/2006 to 2008/2009 school year are listed in Table 1. Table 2 presents the characteristics and perceived effectiveness of four different types of programs, including the number of participants, program attendance, number of program aims and constructs,

Table 1 Description of data characteristics from 2005 to 2009

	S1				S2			S3	
	2005/2006 (EIP-S1)	2006/2007 (FIP-S1)	2007/2008 (FIP-S1)	2008/2009 (FIP-S1)	2006/2007 (EIP-S2)	2007/2008 (FIP-S2)	2008/2009 (FIP-S2)	2007/2008 (EIP-S3)	2008/2009 (FIP-S3)
Total schools joined P.A.T.H.S.	52	207	213	197	49	196	198	48	167
(i) 10-h program	23	95	108	104	27	113	110	29	104
(ii) 20-h program	29	112	105	93	22	83	88	19	63
Tier 2 Program:									
Mean no. of sessions of program implementation	19.53	22.91	22.71	22.11	22.63	23.13	22.04	22.77	23.39
	(1–63)	(6–62)	(8–120)	(5–76)	(1–62)	(5–119)	(5–77)	(10–55)	(5–90)
Hours per sessions	1.5–3	1.5–3	1.5–3	1.5–3	1.5–3	1.5–3	1.5–3	1.5–3	1.5–3
Total no. of participants	3,072	13,194	15,494	16,452	2,542	12,490	14,612	2,114	13,031
(i) Students	2,718	12,092	13,032	14,192	2,439	11,347	13,382	2,114	12,062
(ii) Adults	354	1,102	2,462	2,260	103	1,143	1,230	0	969
Mean no. of participants per school	59.08	63.74	72.74	83.51	51.88	63.72	73.80	44.04	78.03
	(21–274)	(14–308)	(13–360)	(3–1,272)	(17–240)	(10–435)	(15–351)	(6–93)	(9–406)
Total no. of respondents	2,173	10,225	9,931	9,216	1,898	8,489	9,166	1,739	7,378
Mean no. of student respondents per school	41.79	49.54	46.84	46.78	38.73	43.29	46.29	36.23	44.18
	(20–151)	(6–294)	(7–198)	(3–215)	(8–199)	(7–196)	(7–281)	(2–136)	(5–222)

Note: EIP Experimental Implementation Phase, *FIP* Full Implementation Phase, *S1* Secondary 1, *S2* Secondary 2, *S3* Secondary 3

Table 2 Summary of the characteristics and perceived effectiveness of the Tier 2 Program

Main program approach	Clientele	Average no. of participants	Average program attendance (%)	Average no. of program aims indicated in the reports	Average no. of constructs indicated in the reports	Mean of overall effectiveness
Adventure-based counseling approach and volunteer training and services (Type A) (N=525)	S1 (n=315)	60.40	83.20	2.05	6.52	4.58
	S2 (n=151)	50.58	81.56	2.49	6.56	4.64
	S3 (n=59)	55.34	81.15	2.39	6.53	4.76
Adventure-based counseling approach only (Type B) (N=373)	S1 (n=196)	59.92	82.64	2.14	6.25	4.54
	S2 (n=109)	58.44	81.53	2.06	6.65	4.59
	S3 (n=68)	54.51	82.97	2.26	5.96	4.70
Volunteer training and services only (Type C) (N=220)	S1 (n=82)	60.29	82.22	2.41	6.54	4.56
	S2 (n=99)	54.35	82.54	2.37	6.61	4.62
	S3 (n=39)	65.28	82.90	2.21	6.90	4.67
Other approaches (Type D) (N=208)	S1 (n=75)	67.03	86.06	2.09	5.24	4.56
	S2 (n=84)	71.18	81.21	1.98	6.21	4.49
	S3 (n=49)	61.65	83.72	2.20	5.65	4.61

Note: Small letter "n" refers to the number of program for that sub-group and capital letter "N" refers to the total number of program for that particular approach

as well as the mean overall effectiveness. Apart from students, some programs also involved parents and teachers. Among the four program approaches, Type A (ABC plus VTS) was the most widely employed approach, which was used in 525 out of 1,326 programs (39.6 %). This was followed by Type B (ABC only), which accounted for 373 programs (28.1 %), and then Type C (VTS only, 220 programs, 16.6 %) and Type D (approaches other than ABC or VTS, 208 programs, 15.7 %). The average number of participants ranged from 50.58 to 71.18, with the average program attendance ranging from 81.15 to 86.06 %.

The quantitative findings based on the closed-ended questions among four different program approaches are presented in Tables 3, 4, and 5. Over four-fifths of responses regarding participants' views toward program, implementers, and perceived effectiveness were positive. From Tables 3, 4, and 5, it was observed that Type A programs received the highest scores in all items. For example, 86.89 % of participants opined that "the activities were carefully planned" in Type A program (Table 3) but only 85.36, 85.39, and 85.81 % positive responses were recorded for Types B, C, and D programs, respectively. While 91.83 % of Type A participants were satisfied with the worker (Table 4), 89.48, 90.74, and 90.73 % of the participants of Types B, C, and D were satisfied with the worker, respectively. However, regarding possible differences among the four program types in different measures (views toward program, implementers, and perceived effectiveness) of subjective outcome evaluation, results of ANOVA did not show any significant difference ($p > .05$ in all cases).

To further examine the effects of adventure-based counseling, the program approaches were further re-categorized as ABC related (i.e., Type A and Type B programs) and non-ABC related (i.e., Type C and Type D programs) for further analysis (Tables 6, 7, and 8). Similarly, no significant difference was found between the two major modes of program in terms of perceptions of the program, implementers, and perceived effectiveness. The mean scores of the key variables for the two major modes of program are presented in Table 9. Regarding the predictors of perceived effectiveness of the Tier 2 Program, analyses showed that perceived quality of the program and instructor positively predicted perceived effectiveness of the program (Table 10).

Discussion

One unique feature of this study is that the total number of adolescents participating in the Tier 2 Program held between 2005 and 2009 was very large, with a total of 1,326 programs involving 83,378 students. Besides, it is the first systematic study in different Chinese contexts examining the perceived effectiveness of ABC versus non-ABC programs. Overall speaking, the descriptive findings showed that both ABC-related and non-ABC-related programs were well received by the program participants. The participants also had very favorable perceptions of the instructors and benefits of these two modes, and they did not differ in terms of subjective outcome evaluation findings.

Table 3 Comparison of the positive views toward the Tier 2 Program among four different program approaches

| | Participants with positive responses in different program approaches | | | | | | | | | |
| | ABC approach and volunteer training and services[a] | | ABC approach[b] | | Volunteer training and services[c] | | Others[d] | | Overall | |
	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%
1. The activities were carefully planned	18,941	86.89	15,500	85.36	8,660	85.39	8,448	85.81	51,549	86.81
2. The quality of the service was high	18,873	86.67	15,281	84.29	8,642	85.29	8,382	84.94	51,178	86.41
3. The service provided could meet the participants' needs	19,017	87.38	15,341	84.70	8,726	86.17	8,403	85.35	51,487	87.01
4. The service delivered could achieve the planned objectives	19,162	88.08	15,647	86.42	8,780	86.71	8,455	85.79	52,044	87.81
5. Participants could get the service they wanted	18,609	85.60	14,996	82.84	8,480	83.83	8,169	83.04	50,254	85.07
6. Participants had much interaction with other participants	19,111	87.90	15,705	86.88	8,729	86.40	8,499	86.44	52,044	87.88
7. Participants would recommend others who have similar needs to participate in the program	18,074	83.16	14,783	81.85	8,261	81.68	7,974	81.18	49,092	83.22
8. On the whole, participants were satisfied with the service	19,453	89.47	15,763	87.16	8,857	87.68	8,656	88.06	52,729	89.05

Note:

[a] The program contents related to both adventure-based counseling approach and volunteer training and services were indicated in the Tier 2 Program reports

[b] The program contents related to adventure-based counseling approach were indicated in the Tier 2 Program reports

[c] The program contents related to volunteer training and services were indicated in the Tier 2 Program reports

[d] Except for adventure-based counseling approach and volunteer training and services, other program contents were indicated in the Tier 2 Program reports

Table 4 Comparison of the positive views toward the Tier 2 Program workers among four different program approaches

| | Participants with positive responses in different program approaches | | | | | | | | | | | |
| | ABC approach and volunteer training and services | | ABC approach | | Volunteer training and services | | Others | | Overall | |
	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%
1. The worker(s) had professional knowledge	19,744	90.70	16,228	89.49	9,103	89.82	8,842	89.85	53,917	90.85
2. The worker(s) demonstrated good working skills	19,565	89.88	15,897	87.76	9,011	88.93	8,700	88.50	53,173	89.71
3. The worker(s) were well prepared for the program	19,921	91.06	16,334	90.23	9,160	90.53	8,922	90.78	54,337	91.47
4. The worker(s) understood the needs of the participants	19,502	89.67	15,767	87.17	8,954	88.51	8,639	87.97	52,862	89.33
5. The worker(s) cared about the participants	19,777	90.97	15,953	88.18	9,093	89.85	8,757	89.14	53,580	90.44
6. The worker(s)' attitudes were very good	19,797	91.06	15,987	88.41	9,149	90.48	8,801	89.67	53,734	90.77
7. The worker(s) had much interaction with participants	19,004	87.41	15,365	84.98	8,752	86.49	8,398	85.54	51,519	87.21
8. On the whole, participants were satisfied with the worker(s)	19,972	91.83	16,198	89.48	9,189	90.74	8,928	90.73	54,287	91.44

Table 5 Comparison of the positive views toward the Tier 2 Program effectiveness among four different program approaches

	Participants with positive responses in different program approaches									
	ABC approach and volunteer training and services		ABC approach		Volunteer training and services		Others		Overall	
	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%	N (total response)	%
1. The service has helped participants a lot	18,557	85.96	15,155	84.29	8,452	84.12	8,116	83.71	50,280	85.62
2. The service has enhanced participants' growth	18,931	87.75	15,419	85.79	8,631	85.99	8,265	85.28	51,246	87.30
3. In the future, participants would receive similar service(s) if needed	18,325	85.08	14,903	83.00	8,333	83.14	7,985	82.47	49,546	84.67
4. Participants have learned how to help themselves through participating in the program	19,081	88.55	15,700	87.59	8,689	86.66	8,359	86.46	51,829	88.26
5. Participants have had positive change(s) after joining the program	18,873	87.70	15,392	85.90	8,591	85.75	8,245	85.31	51,101	87.14
6. Participants have learned how to solve their problems through participating in the program	18,935	88.34	15,539	86.98	8,590	86.05	8,249	85.78	51,313	87.73
7. Participants' behavior has become better after joining this program	18,021	83.73	14,656	81.82	8,179	81.58	7,743	80.06	48,599	82.93
8. Those who knew the participants agree that this program has induced positive changes in them	17,840	82.94	14,490	80.88	8,133	81.16	7,769	80.47	48,232	82.60

Table 6 Comparison of the positive views toward the Tier 2 Program between ABC and non-ABC approaches

| | Participants with positive responses in different program approaches | | | |
| | ABC approach group[a] | | Non-ABC approach group[b] | |
	N (total response)	*%*	*N* (total response)	*%*
1. The activities were carefully planned	34,441	86.19	17,108	85.60
2. The quality of the service was high	34,154	85.59	17,024	85.12
3. The service provided could meet the participants' needs	34,358	86.16	17,129	85.77
4. The service delivered could achieve the planned objectives	34,809	87.33	17,235	86.26
5. Participants could get the service they wanted	33,605	84.35	16,649	83.44
6. Participants had much interaction with other participants	34,816	87.44	17,228	86.42
7. Participants would recommend others who have similar needs to participate in the program	32,857	82.57	16,235	81.43
8. On the whole, participants were satisfied with the service	35,216	88.42	17,513	87.86

Note:

[a]The program contents related to adventure-based counseling approach were indicated in the Tier 2 Program reports

[b]The program contents related to non-adventure-based counseling approach were indicated in the Tier 2 Program reports

Table 7 Comparison of the positive views toward the Tier 2 Program workers between ABC and non-ABC approaches

| | Participants with positive responses in different program approaches | | | |
| | ABC approach group[a] | | Non-ABC approach group[b] | |
	N (total response)	*%*	*N* (total response)	*%*
1. The worker(s) had professional knowledge	35,972	90.15	17,945	89.83
2. The worker(s) demonstrated good working skills	35,462	88.92	17,711	88.71
3. The worker(s) were well prepared for the program	36,255	90.98	18,082	90.65
4. The worker(s) understood the needs of the participants	35,269	88.53	17,593	88.25
5. The worker(s) cared about the participants	35,730	89.70	17,850	89.50
6. The worker(s)' attitudes were very good	35,784	89.86	17,950	90.08
7. The worker(s) had much interactionwith participants	34,369	86.31	17,150	86.02
8. On the whole, participants were satisfied with the worker(s)	36,170	90.76	18,117	90.73

Note:

[a]The program contents related to adventure-based counseling approach were indicated in the Tier 2 Program reports

[b]The program contents related to non-adventure-based counseling approach were indicated in the Tier 2 Program reports

Table 8 Comparison of the positive views toward the Tier 2 Program effectiveness between ABC and non-ABC approaches

| | Participants with positive responses in different program approaches | | | |
| | ABC approach group[a] | | Non-ABC approach group[b] | |
	N (total response)	%	N (total response)	%
1. The service has helped participants a lot	33,712	85.20	16,568	83.92
2. The service has enhanced participants' growth	34,350	86.86	16,896	85.64
3. In the future, participants would receive similar service(s) if needed	33,228	84.13	16,318	82.81
4. Participants have learned how to help themselves through participating in the program	34,781	88.11	17,048	86.56
5. Participants have had positive change(s) after joining the program	34,265	86.88	16,836	85.53
6. Participants have learned how to solve their problems through participating in the program	34,474	87.72	16,839	85.92
7. Participants' behavior has become better after joining this program	32,677	82.86	15,922	80.83
8. Those who knew the participants agree that this program has induced positive changes in them	32,330	82.01	15,902	80.82

Note:

[a]The program contents related to adventure-based counseling approach were indicated in the Tier 2 Program reports

[b]The program contents related to non-adventure-based counseling approach were indicated in the Tier 2 Program reports

Table 9 Mean, standard deviations, Cronbach's alphas, and mean of inter-item correlations among the variables by ABC and non-ABC program approaches

| | ABC-related group | | Non-ABC-related group | | Overall | |
| | M | α | M | α | M | α |
	(SD)	(Mean[a])	(SD)	(Mean[a])	(SD)	(Mean[a])
Program content (10 items)	4.63	.99	4.62	.99	4.62	.99
	(.40)	(.90)	(.41)	(.91)	(.41)	(.90)
Program implementers (10 items)	4.82	.99	4.83	.99	4.83	.99
	(.39)	(.90)	(.39)	(.92)	(.39)	(.91)
Program effectiveness (16 items)	4.60	.99	4.58	.99	4.59	.99
	(.41)	(.91)	(.41)	(.91)	(.41)	(.91)
Total effectiveness (36 items)	4.68	.99	4.68	.99	4.68	.99
	(.39)	(.86)	(.39)	(.87)	(.39)	(.86)

[a]Mean inter-item correlations

Table 10 Multiple regression analyses predicting program effectiveness

| | Predictors | | Model | |
| | Program content | Program implementers | | |
	β^a	β^a	R	R^2
ABC-related group	.60**	.41**	.99	.98
Non-ABC-related group	.63**	.38**	.99	.98
Overall	.61**	.40**	.99	.98

[a]Standardized coefficients

**$p<.01$

There are several plausible explanations for the finding that there were no significant differences between the two different program modes. First, the present study focuses only on client satisfaction. Although the use of a standardized assessment tool with known reliability and validity for conducting client satisfaction survey reduces biases and eliminates many of the problems commonly found in hastily designed questionnaires (Royse, 2004), subjective outcomes for all programs of the project were grouped into common elements, and therefore the questionnaires used may be insensitive to the unique features of different programs. The differentiation power of the standardized measure for the two program modes might be reduced eventually. In short, one cannot kill two birds with one stone.

Second, as reflected in the results of the evaluation of the perceived perceptions of the programs, the program implementers, and perceived program effectiveness for the four different types (Tables 3, 4, and 5) and the two modes (Tables 6, 7, and 8), the results on all items were consistently positive at the higher end with a minimum of 81.18 % and a maximum of 91.83 % positive ratings. Furthermore, the largest difference in all item ratings for the four different types of programs on the three measures was only 8.49 % (81.18–89.47 % in Table 3, 84.98–91.83 % in Table 4, and 80.06–88.55 % in Table 5). The same situation is found in the analysis of the two program modes (81.43–88.42 % in Table 6, 86.02–90.98 % in Table 7, and 80.82–88.11 % in Table 8) with a maximum variation of 7.9 % in all item ratings. The consistently positive ratings with little variation among all items regardless of program types or modes may explain the finding of no difference (i.e., ceiling effect). In fact, this is a limitation of subjective outcome evaluation that the related ratings are commonly found to be on the higher end.

Third, although ABC has been commonly described in terms of its "magical" effect in transforming young people, young people may also be transformed in subtle ways in voluntary work. Through voluntary work, young people can model and learn desirable behavior. Besides, voluntary work can also benefit the overall development of young people in the areas such as self-confidence, self-understanding, self-efficacy, interpersonal skills, and compassion.

One of the limitations of the present study is that it is just a client satisfaction study. However, it is one of many evaluation strategies adopted for evaluating the whole project. Since the project consisted of two tiers, the subjective outcome evaluation is part and parcel of a comprehensive evaluation of the whole project.

Moreover, the use of a validated subjective outcome evaluation measure on a large population of Chinese adolescents is a solid contribution in responding to the comments of Royse (2004) that the lack of standardized assessment tools for conducting client satisfaction survey introduces biases for the client satisfaction approach.

Since we could not find any significant difference in the subjective outcomes among the four types of programs, and between the two modes as reported in this chapter, objective outcome evaluation studies are recommended in future research. However, it must be noted that even though the two approaches address the same target systems (knowledge, value, belief, emotion, behavior), they are targeting different positive youth development constructs and are expected to generate different outcomes. For example, the adventure-based counseling is widely adopted as a developmental and therapeutic approach with adolescents and young people. It helps the participants develop group cohesion (Glass & Benshoff, 2002), enhance their sense of well-being and social self-concept, develop general self-efficacy and positive emotions that could be transferred to their daily lives, develop the appropriate inner resources to engage in new challenges, and enhance their spiritual development (Cheung, 2010; Glass & Benshoff, 2002; Kyriakopoulos, 2010). In a meta-analysis of 43 studies, Cason and Gillis (1994) showed an average of 12.2 % improvement for adolescents participating in an adventure program. Similarly, joining volunteer community service program enhances secondary students' self-esteem (Meinhard & Foster, 2006), young adults' positive affect and mental health (Pavlova & Silbereisen, 2012), as well as adults' positive attitude, social interaction, and professional development (Miller et al., 2002).

It must be pointed out that comparative analyses among these 1,326 programs are very complicated because of the variations in the design of programs for adolescents studying in different schools. Nevertheless, for program theory development and a rational choice of the program theory in designing secondary prevention programs for adolescents, further investigation of the possible differences in the subjective and objective outcomes in relation to types and modes according to the espoused theory (Argyris & Schön, 1974) is fully justified. The use of randomized control-delayed treatment design should also be carried out.

Although the ABC approach has been popular among social workers working with children and adolescents, it is comparatively more expensive because of its labor intensiveness and special requirements in staffing and equipment. Compared to the VTS approach, the ABC approach needs much more resource as it requires different levels of specialized training of the coach and a higher participant-to-coach ratio because of safety consideration. ABC intervention program also requires specialized facilities, including appropriate venue and equipment for holding low- or high-risk activities. As the use of ABC approach in general requires a higher cost in program expenditure than the use of the VTS approach, it is necessary to construct cost-benefit analyses for these two modes of intervention in the future.

Consistent with the previous studies, the finding showed that both perceived program attributes and instructor qualities predicted perceived program effectiveness (Shek & Lee, 2012). Nation et al. (2003) pointed out that a comprehensive program and well-trained program implementers are important elements of an effective

program. Weissberg (2000) also pointed out that a well-designed program and high-quality program implementers were commonly found in effective school-based social-emotional learning programs. There are also research findings showing that qualities of the program implementation and program implementers are related to program outcomes. For example, Harachi and colleagues (Harachi, Abbott, Catalano, Haggerty, & Fleming, 1999) showed that instructional strategies (proactive classroom management, cooperative learning methods, strategies to enhance student motivation, student involvement and participation, reading strategies, and interpersonal and problem-solving skills training) were related to student social competencies. Tobler and colleagues (Tobler, Lessard, Marshall, Ochshorn, & Roona, 1999) also showed that programs with high peer interaction were more effective than programs with low peer interaction, and that the delivery method instead of the program content determined the success of the program. The present study further showed that both the program and instructor qualities are important determinants of perceived effectiveness of positive youth development programs in the Chinese contexts. The findings suggest that developing high-quality program and implementing them in a quality manner are instrumental to the success of positive youth development programs. Furthermore, as quality of the program implementers is important to program success, systematic and rigorous training for the potential program implementers is important for promoting program success.

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Lessons Learned, Emergent Issues, and Future Directions

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Introduction

The background and design of the Project P.A.T.H.S. are outlined in the preceding chapters of this book. In chapter "Adolescent Developmental Issues in Hong Kong: Phenomena and Implications for Youth Service," developmental issues among adolescents in Hong Kong are highlighted. Based on the review, we raised the question of how we can nurture adolescents in Hong Kong. In chapter "Conceptual Framework Underlying the Development of a Positive Youth Development Program in Hong Kong," it is argued that the positive youth development is a promising approach to nurture adolescents that would promote adolescent holistic development and reduce adolescent developmental problems. Based on the above argument, a positive youth development program entitled "P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme" (the Project P.A.T.H.S.) was initiated by The Hong Kong Jockey Club Charities Trust in 2004 to promote the holistic development of Chinese adolescents, with an earmarked grant of HK$400 million. Because of the positive evaluation findings of the initial phase, an extension phase was further implemented from 2009 to 2012, with an additional earmarked grant of HK$350 million.

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In chapter "Development of a Positive Youth Development Program in Hong Kong," the design of the Project P.A.T.H.S. is described, and several teaching units are illustrated. In chapter "Evaluation of the Project P.A.T.H.S. Using Multiple Evaluation Strategies," the evaluation design and mechanisms utilized in the Project P.A.T.H.S. are outlined. The unique features of the evaluation of the project are also highlighted. Adopting an evaluation design based on multiple methods, data, time points, and perspectives, several evaluation strategies including objective outcome evaluation, subjective outcome evaluation, secondary data analyses, qualitative evaluation (focus groups, in-depth interviews, and student weekly diaries), process evaluation, and personal construct evaluation were carried out.

In the next few chapters, evaluation findings based on different evaluation strategies are presented. Utilizing the data collected over 5 years, the findings showed that compared with the control participants, students in the experimental schools thrived better (Chapter "Objective Outcome Evaluation of the Project P.A.T.H.S.: Longitudinal Study Based on Indicators of Positive Youth Development") and had slower growth in risk behavior (Chapter "Impact of the Project P.A.T.H.S. on Adolescent Risk Behavior: A Five-Year Longitudinal Study"). Utilizing subjective outcome evaluation data, analyses showed that the program participants and implementers had positive perceptions of the program, implementers, and benefits (Chapters "Subjective Outcome Evaluation Based on the Program Participants: Does Dosage Matter?" and "Subjective Outcome Evaluation Based on the Perceptions of the Program Implementers"). Secondary analyses of the reports submitted by the schools (Chapter "Subjective Outcome Evaluation of the Project P.A.T.H.S.: Secondary Analyses of the Qualitative Data Collected from Program Implementers) and interim evaluation (Chapter "Interim Evaluation of Project P.A.T.H.S.: An Integration of Findings Based on Program Implementers") also showed similar conclusions. Qualitative evaluation findings based on the program participants (Chapter "Qualitative Evaluation of the Project P.A.T.H.S.: Narrative Findings Based on Focus Groups with Participating Students") and implementers (Chapter "Qualitative Findings Derived from Focus Groups Based on the Program Implementers") similarly revealed the perceived effectiveness of the program in promoting the holistic development of the program participants. Student weekly diaries (Chapter "Evaluation Based on Weekly Diaries Written by the Students") and repertory grid tests (Chapter "Evaluation Based on Personal Construct Psychology: Findings Based on the Repertory Grid Test") also revealed that the participants believed that they had positive changes after joining the program. As far as the implementation quality of the program is concerned, process evaluation showed that program adherence and implementation quality was very high (Chapter "Process Evaluation of the Project P.A.T.H.S. in Hong Kong"). Finally, evaluation findings based on the Tier 2 Program revealed that students with greater psychosocial needs perceived the program, instructors, and benefits in a favorable light (Chapter "Using Different Programs to Help Adolescents with Greater Psychosocial Needs").

Lessons Learned from the Project

Shek and Sun (2012) outlined the following lessons learned from the project:

Lesson 1: Program Development Is a Complex Matter Which Should Not Be Treated Lightly

While practice wisdom must be respected and it is not difficult to develop "home-based" youth development programs, the development of positive youth development programs require professional expertise and utilization of the best available evidence. For example, it is significant to make important decisions about the related theoretical framework underlying the program, implementation mechanisms, training issues, and evaluation strategies. The principles underlying the design of the Project P.A.T.H.S. programs are outlined in Shek and Sun (2012).

Lesson 2: Training Programs for Potential Program Implementers Are Important

A review of the literature shows that training plays an indispensable role in the smooth implementation of positive youth development programs. In the Project P.A.T.H.S., much effort was spent on the training programs, with 20 h of training required for the potential program implementers at each grade. The following principles were adopted in the design of training programs (Shek, Sun, & Merrick, 2011; Shek & Wai, 2008):

- Principle 1: Design of training programs is based on training theories/models.
- Principle 2: Training programs should help the trainees to acquire knowledge about adolescents and the program.
- Principle 3: Training programs should help the trainees to acquire knowledge about the curriculum structure of the program.
- Principle 4: Cultivation of appropriate implementation skills.
- Principle 5: Cultivation of self-reflection skills.
- Principle 6: Encouragement of workers to be role models.
- Principle 7: Promotion of motivation of the trainees.
- Principle 8: Promotion of self-efficacy of the trainees.
- Principle 9: Provision of opportunities for demonstration and practice.
- Principle 10: Provision of adequate training time.
- Principle 11: Consideration of cultural context in the design of training program.
- Principle 12: Evaluation of training program.

For the initial phase of the project, a total of 4,778 frontline teachers, social workers, and allied professionals participated in the training program. In a series of evaluation studies, it was found that the trainees had positive views of the program,

workers, and effectiveness of the program (Shek & Chak, 2012). While there are many factors affecting program effectiveness, it is our firm belief that the effectiveness of the Project P.A.T.H.S. is to a great extent due to the success of the training program.

Lesson 3: It Is Important to Identify Determinants of Program Implementation Quality

Based on a series of cross-case studies, Shek and Sun (2008) concluded that policy, people, program, process, and place factors (5Ps) are important facilitators or barriers for successful implementation of positive youth development programs in the school contexts. In particular, policy support and people (such as commitment and passion of the teachers) are major factors influencing the quality of program implementation. Besides, the case studies showed that the Tier 1 Program of the Project P.A.T.H.S. can be incorporated in the formal curriculum and in schools admitting different types of students (Lam, 2008a, 2008b; Shek, Chak, & Chan, 2008).

Lesson 4: The Need for Multiple Evaluation Strategies

One significant contribution of the Project P.A.T.H.S. is that it illustrates the importance of evaluation and the use of multiple evaluation methods in positive youth development programs. Systematic collection of evaluation data in positive youth development programs serves two purposes. First, it provides objective information on whether the program is effective, which will have a significant bearing on the long-term sustainability of the program. Second, positive evaluation findings constitute incentive to motivate the program implementers because it will give them a clear message that they are engaging in "promising" programs. Besides, the use of different evaluation strategies can give a more balanced and comprehensive picture about the program effects. Clearly, the Project P.A.T.H.S. demonstrates the feasibility and utility of conducting evaluation in the social welfare sector, which is much needed in different Chinese communities (Shek, Lam, & Tsoi, 2004; Shek & Yu, 2011).

Lesson 5: The Program Has Positive Impact for Different Stakeholders

Two general conclusions can be drawn from the evaluation findings. First, compared with the control participants, students in the experimental schools had faster rates of holistic development but lower rates of risk behavior development. Second, different stakeholders had positive views of the program, implementers, and benefits of the program. In short, in terms of objective and subjective outcome indicators, the program is effective.

The project has much impact within and outside Hong Kong. The project has enormous impact on life skills education for young people in Hong Kong. In terms of advocacy, it has raised the awareness of teachers and social workers about the importance of life skills development in young people in Hong Kong.

Practically, the project also provides a useful and practical framework for youth development with over 280 schools participating in the project. The number of schools joining the project can be regarded as impressive and outstanding. In particular, it is encouraging because more than half of the participating schools have included the program in the formal curriculum. Furthermore, the project has changed the mind-set of the teachers and social workers involved. When they look at young people, they become more strength-based rather than deficiency-based. Finally, based on the framework of the Project P.A.T.H.S., the first author has designed a "university version" of the Tier 1 Program entitled "Tomorrow's Leaders" at The Hong Kong Polytechnic University. This course will be taken by more than 2,100 students at The Hong Kong Polytechnic University per year. This university-version project is described in details in chapter "Development of a Positive Youth Development Subject in a University Context."

The project also has an impact on government policies in Hong Kong. The project is regarded as an antipoverty initiative by the Poverty Commission. The project is regarded as a key youth enhancement initiative by the Government of the Hong Kong Special Administrative Region, P.R.C. It is also regarded as a key adolescent prevention program (e.g., Panel on Child Fatality Review, Task Force on Youth Drug Abuse). Finally, the project is listed as a program that can be used for anti-drug education in the school context (Resource Kit for Teachers on Anti-Drug Education).

The project has created much impact outside Hong Kong. The Secondary 1 to Secondary 3 curricula of the project have been adapted and implemented in Shanghai for 3 years. Because of the overwhelming success of the project, Tin Ka Ping Foundation funded a pilot project for 3 years in East China. The High School Affiliated to Renmin University of China (Rendafuzhong) also implemented the program in September 2012. The Secondary 1 curriculum of the project has also been adapted and implemented in several schools in Macau. The Education and Youth Affairs Bureau has initiated a pilot project to test the effectiveness of the program in Macau.

Lesson 6: Long-Term Sustainability of the Program Is Important

From 2005 to 2012, with the financial support of The Hong Kong Jockey Club Charities Trust, the project has been implemented successfully for 7 years. With the completion of the extension phase in 2012, it is important to consider how the program can be sustainable in the school context in the future. Obviously, it is important for the government to rethink how to promote programs on psychosocial competencies and how to promote evidence-based programs in the school context. At the same time, attitude of the schools is also important. Schools should rethink what the most important aspect of youth development is and what the role of positive youth development in holistic youth development is. Ideally speaking, schools should incorporate the program in the formal curriculum so that long-term sustainability of the program can be guaranteed. Besides, development of e-learning packages can enable workers to continue using the package after exhaustion of the funding.

Lesson 7: Effectiveness of the Project P.A.T.H.S. Should Be Further Examined

Although the evaluation studies presented in this book suggest that the Project P.A.T.H.S. is effective, the limitations of the evidence should be recognized. In the first place, only one randomized group trial was conducted. According to Biglan, Mrazek, Carnine, and Flay (2003), there are different "grades" of evidence with varying degrees of rigor. For the lowest grade of evidence (Grade 7), it is based on clinical experience by respected researchers and practitioners as well as case reports. In the next grade of evidence (Grade 6), findings are based on the use of pre-experimental design without the involvement of a control group. For Grade 5 evidence, research findings based on non-equivalent group designs are generated. When researchers conduct at least one well-designed, randomized, controlled trial or an interrupted time-series design that is replicated across three cases, such studies generate Grade 4 evidence. When a single research team is involved in multiple well-designed, randomized, controlled trials or multiple well-designed, interrupted time-series experiments, such studies generate Grade 3 evidence. When two or more independent research teams conduct multiple well-designed, randomized, controlled trials or multiple well-designed, interrupted time-series experiments, Grade 2 evidence is generated. Finally, when the requirements for Grade 2 evidence are met and the preventive intervention is implemented in its intended setting with sufficient staff training and monitoring of implementation and outcomes, Grade 1 evidence is generated. Obviously, we need more randomized group trials at multiple sites to further substantiate the scientific and practical value of the project in different Chinese communities. For qualitative studies, it would be illuminating if more "in-depth stories" from the program participants could be collected.

Emergent Issues for Positive Youth Development Programs

Besides the lessons learned from the past years, several issues pertinent to the development, implementation, and evaluation of positive youth development programs in different Chinese communities are identified. These issues include types of programs needed, theoretical and empirical bases of the program, multi-disciplinary collaboration, training of program implementers, quality of program implementation, evaluation strategies and program outcome indicators, and sustainability of the program.

Issue 1: What Positive Youth Development Constructs and Programs Do We Need?

Proponents of positive youth development argue that by strengthening positive youth development attributes in young people, they will thrive and the related risk

behavior will decrease. While this is an attractive conjecture, it is important to ask whether positive youth development programs can solve adolescent developmental problems, and what sorts of problems they can solve. Besides, several questions should be asked:

- Among the positive youth development constructs (e.g., psychosocial competence, resilience, spirituality), which ones are more important than the others? In particular, which constructs have stronger intervention effects?
- Should we cover a wide range of positive youth development constructs (as in the case of the Project P.A.T.H.S.) or focus on a few constructs (such as resilience training)? If we cover too many constructs, time is an obvious problem, and the sheer coverage of a wide range of constructs constitutes "dosage" problem. On the other hand, if we focus on a few constructs, we have to demonstrate that these constructs are relatively important predictors of adolescent development. In other words, we have to examine the relationships among positive youth development constructs and investigate their relationships to adolescent developmental trajectories.
- Are positive youth development programs panaceas for *all* adolescent developmental issues? Is there a goodness of fit between specific constructs/programs and specific adolescent development issues?
- What are the limitations and inadequacies of positive youth development programs for helping young people to thrive? Can they help young people with different psychosocial needs?

Issue 2: What Are the Theoretical and Empirical Bases of the Developed Programs?

For programs that have promise, they must be based on well-articulated theories and/or empirical research findings. Ideally speaking, program developers should use the best available theories and research findings to guide the program design and implementation. Hence, program developers should consciously ask about the theoretical and empirical bases of the programs to be developed and implemented. As such, there are several questions that colleagues in the field should consider:

- What are the theoretical mechanisms guiding the development of the content of the proposed curriculum? It is noteworthy that there are different theoretical conceptualizations of a specific positive youth development construct. For example, the notion of positive self can be addressed by Erikson's theory of identity or self-theories based on the social-cognitive theoretical perspective. The notion of bonding can be addressed from the perspectives of attachment theory, interpersonal theories, and ecological models. Obviously, a well-conceived positive youth development program should specify the theoretical mechanisms that are conducive to the program effects (e.g., modeling, experiential learning, cognitive restructuring, self-development). Besides, effective positive youth development programs must be based on the best available evidence demonstrating

that the program to be designed will be effective to promote adolescent development.

- What teaching and learning processes are assumed and what theoretical mechanisms are utilized in the program delivery? In positive youth development programs, it is commonly assumed that experiential learning and reflection are important. However, such emphases may be manifested differently, such as "talk therapies" in small group learning settings or "walk therapies" in the case of adventure-based counseling programs. Besides, the assumptions about the roles of the teachers and students (e.g., degree of activity and interaction) should be examined.

- What cultural elements should be addressed in the conceptualization and design of the program? This question is important because most of the existing positive youth development programs are developed in the Western contexts where individualistic values and styles are upheld. Hence, it is necessary to examine how the specific cultural factors may interact with theoretical mechanisms in the generation of the program effects. Obviously, the unique characteristics of the Chinese culture (such as a strong emphasis on academic excellence, filial piety, and harmonious interpersonal relationships) should be carefully considered.

Issue 3: Who Should Design and Implement the Programs?

While the development of positive youth development programs is a scientific and professional endeavor, input from frontline workers and young people is indispensable. The reason is simple – the major stakeholders know what should work for young people. Therefore, development of the program in the vacuum of a psychology laboratory is doomed to fail because there is a lack of ecological validity. Besides, it is of paramount importance that professionals in different disciplines collaborate in the program development process. While psychologists may be good at scientific theories, teachers may know the specific school factors that will affect the program outcomes, and the social workers can appreciate the psychosocial needs of the students.

In the case of the Project P.A.T.H.S., there is collaboration among different stakeholders on several levels. First, academics in five universities in Hong Kong have collaborated on the project, with colleagues coming from different disciplines including psychology, social work, counseling, education, and occupational therapy. Second, in the process of program development, stakeholders including teachers, social workers, counselors, and students were involved. Third, social workers and teachers were involved in the implementation of the project. Based on our experience, the following questions should be considered by researchers who intend to develop positive youth development programs:

- What professionals should be involved in the design, implementation, and evaluation of the developed programs?
- How can interdisciplinary collaboration and maximum involvement of the stakeholders in the program development process be promoted?

Issue 4: What Training Programs Do We Need?

Although it is commonly believed that training is an important prerequisite for successful program implementation, there are very few publications on training programs in positive youth development programs (Shek & Merrick, 2010; Shek et al., 2011). In the field of education, it is believed that the provision of training for the potential program implementers can increase the confidence of the program implementers. Veenman, Van Tulder, and Voeten (1994) suggested that in-service training could serve three main purposes: "(1) to stimulate the professional competence and development of teachers; (2) to improve school practice; and (3) to implement political agreed-upon innovations in schools" (p. 303).

In the Project P.A.T.H.S., systematic and well-conceived training programs were designed. For each grade (Secondary 1 to Secondary 3), the potential program implementers were invited to participate in a 20-h training workshop over 3 days with 12 sessions. The training program has the following six general objectives which enable participants: (a) to understand the nature of adolescent development and the related issues and to cultivate a positive attitude to adolescent development; (b) to understand the nature of positive youth development, including its basic concepts, related programs, and research; (c) to familiarize themselves with the nature of the Project P.A.T.H.S., including its basic philosophy, design, implementation, and evaluation; (d) to understand the content of the Tier 1 Program, including the core program and elective program; (e) to acquire the attitude, knowledge, and skills that are conducive to the successful implementation of the Tier 1 Program; and (f) to establish a self-help support network among the program participants.

According to Shek (2010) and Shek and Chak (2010), there were several unique features of the training programs of the Project P.A.T.H.S. First, progressive training programs were designed from introductory level (Secondary 1) to intermediate level (Secondary 2) to advanced level (Secondary 3). Second, a balanced emphasis was involved. While the first day (Day 1) covered theoretical, practical, attitude, and values issues, Day 2 and Day 3 of the training focused on discussing the related teaching methodologies and units in the Tier 1 Program. Third, experiential training was emphasized where teachers were encouraged to actively engage in the training programs. Fourth, open discussion and interaction were strongly emphasized in the training programs. Fifth, passion and involvement of the potential program implementers were promoted in the training. Finally, reflective learning was another salient point in the training programs. In retrospect, several questions should be considered in the process of designing and implementing the training program:

- How much time should the potential program implementers spend on training? What are the justifications behind it?
- Will the potential program implementers get assistance from the school to release them to attend the training program?
- What should be the objectives and intended learning outcomes of the training program? Should the program focus on dissemination of knowledge on positive youth development programs (i.e., knowledge-based training) or promotion of

positive attitude among the workers toward adolescents and positive youth
development programs (i.e., values-based training)?

- What should be covered in the training program? Should the training programs
  focus on academic matters or practical skills? For practitioners, they usually
  value practical skills and knowledge. However, overemphasis on the practical
  information will result in a negligence of the underlying theories and value
  issues.
- How should the training programs be evaluated? A review of the literature shows
  that there is a severe lack of scientific studies on evaluation of training programs
  in the field of positive youth development.

Issue 5: What Is the Quality of Program Implementation?

Even if we can design highly scientific and professional programs, the programs
may fail due to poor program implementation. As such, it is important to ensure that
the program is implemented in a high-quality manner via process evaluation.
Scheirer (1994) defined process evaluation as "the use of empirical data to assess
the delivery of programs …. Process evaluation verifies what the program is, and
whether or not it is delivered as intended to the targeted recipients and in the
intended dosage" (p. 40). Unfortunately, evaluation studies on adolescent prevention
and positive youth development programs have been based primarily on objective
outcome evaluation rather than process evaluation (Linnan & Steckler, 2002). In a
review of over 1,200 published prevention studies, Durlak (1997) reported that less
than 5 % of these studies reported findings on program implementation.

There are several justifications for conducting process evaluation (Scheirer,
1994). First, process evaluation can guard against Type III error (i.e., conclusion
that a program does not work because of the operation of other extraneous factors).
Second, feedback collected can promote implementation fidelity. Third, process
evaluation can help program developers to understand whether the intended
targets are receptive to the program. Fourth, process evaluation can help to identify
factors that contribute to program success. Finally, program developers can use
process evaluation findings to understand how the developed program can be
successfully improved.

In the Project P.A.T.H.S., interim evaluation and process evaluation were carried
out to understand the quality of program implementation, as well as the problems
and difficulties confronting the workers implementing the program. Obviously,
adequate manpower and financial resources are necessary to carry out the related
tasks. Several questions should also be considered when the issue of quality of pro-
gram implementation is under consideration:

- What process variables (such as principal support and interdisciplinary collabo-
  ration) may influence the quality of the implementation?
- What is the degree of program adherence and program fidelity?

- Are the program implementers committed to the program implementation process? If not, how can we promote their commitment?
- Are program participants actively involved in the program? If not, how can we promote their participation?

Issue 6: What Evaluation Strategies Should Be Used to Assess the Program Effect?

In the field of education and social work, there has been much debate in the choice of evaluation strategies for program evaluation. As far as paradigms are concerned, the evaluation approaches may be based on positivist, post-positivist, interpretive, and critical theory evaluation paradigms (Denzin & Lincoln, 2005). As far as evaluation methods are concerned, quantitative, qualitative, or mixed-methods approaches can be used (Shek et al., 2004). There are several questions that the program developers should consider:

- What evaluation paradigm should be adopted to evaluate the program and what are the justifications behind it?
- With reference to objective outcome evaluation, what outcome indicators should be used and at what time? It is noteworthy that while some programs are effective, the effects may be quite transient.
- With reference to subjective outcome evaluation, how can we assess the perceptions of the participants and workers? It is noteworthy that both quantitative and qualitative approaches could be used to carry out subjective outcome evaluation.
- What process evaluation strategies should be used? How can we train observers for standardized observations?
- As there are many strands and approaches in qualitative research (Patton, 2002; Shek et al., 2004), what qualitative evaluation methods should be used to evaluate the program?
- How can we triangulate evaluation findings based on different sources and different methods? What happens if different evaluation strategies suggest different conclusions?
- Consistent with the spirit of evidence-based practice (Gambrill, 1999, 2006), how can we promote workers' awareness of the importance of evaluation in the implementation of positive youth development programs?

Issue 7: How Can the Developed Program and Program Effect Be Sustained?

A common issue encountered in the implementation of positive youth development programs is sustainability. For programs that have external funding, the obvious issue is how the program can be sustained after the exhaustion of the financial support. For programs that do not involve external funding, the key issue is whether

there are committed staff members to sustain the programs over time. Another aspect of program sustainability is related to program effect. While it is not difficult to find short-term effects of programs, it is not easy to see any sustained effects of the programs over time. Thus, it is important to ask whether program participants can apply what they have learned in the program to real-life context over time. Basically, the following relevant issues should be considered:

- How can we motivate program participants to apply what they have learned in the programs?
- How can we chart the sustainability of program effects?
- How can we encourage schools to incorporate the programs in the formal school curriculum to promote long-term sustainability of the program?
- How frequently should we revamp the program materials?

Development of Positive Youth Development Programs in the Chinese Contexts: Future Directions

Obviously, it is a long road to popularize positive youth development programs and widely adopt them in children and adolescent service in different Chinese contexts. Looking into the future, there are several areas of work that positive youth development researchers should focus on. The first area is *professional training*. It is noteworthy that professionals working with children and adolescents are not familiar with prevention interventions and positive youth development programs. As such, training in public health, prevention science, and evidence-based practice should be included in the basic and continuing professional education programs for professionals working with youths. The second direction is to conduct more *research on prevention and positive youth development*. Although there is progress in prevention science and positive youth development programs in the West in the past few decades, related development in different Chinese communities is very slow. In the long run, credible databases documenting exemplary and promising programs are also important. It is noteworthy that there are no such credible databases in Chinese contexts.

The third area is *emphasis on holistic youth development*. Besides prevention in physical health, psychosocial intervention targeting health and behavioral problems in adolescents should not be neglected in view of the rising prevalence of related behavior in different contexts. It is obvious that the focus of the public and professionals is put more on prevention of physical illness than psychosocial and behavioral problems in children and adolescents. Obviously, it is necessary to have a paradigm shift in understanding the importance of prevention in different developmental domains of children and adolescents.

The fourth direction relates to the *vision* of the government. Government officials must appreciate the importance of primary prevention and positive youth development programs which will eventually reduce health spending and social costs. Furthermore, without policy support, implementation of positive youth development programs,

particularly school-based programs, would not be possible. In the context of Hong Kong, emphasis on holistic youth development is just lip service from the government without much policy support.

The fifth direction is *expectations about prevention and positive youth development* in the public. While the general public commonly has a high expectation about prevention work for physical illness (e.g., vaccines), their expectation about the quality of psychosocial preventive initiatives (e.g., preventive drug education program) is not high. While the notion of primary prevention is endorsed by the general public, it seems that it is primarily confined to physical illnesses and overlooks psychosocial problems.

The sixth task is *negotiation*. As political processes and cultural ideologies strongly affect the policies, development, and implementation of adolescent prevention programs, more attention should be paid to politics and the "political will" involved in advocating for youth prevention programs. Obviously, development and dissemination of prevention programs are resource intensive. How to gather resource from the government, commercial, and the third sectors at the local, national, regional, and international levels to promote prevention science is an important task to be considered.

Finally, *transmission and dissemination of effective programs* is another direction to work on. Dissemination of research on effective programs for professionals working with children and adolescents is important to engage professionals in using the developed programs. Similarly, strengthening the communication between the government and prevention scientists is a key to the development of prevention-focused policies. Furthermore, educating the public (particularly parents and adolescents themselves) about the value of prevention will promote the use of such programs.

When we take the first letter in these seven areas ("professional training," "research," "emphasis on holistic youth development," "vision," "expectations about psychosocial prevention," "negotiation," and "transmission and dissemination"), the acronym is "prevent." Definitely, joining hands with the government, other allied professionals, parents, adolescents, and the general public, prevention scientists and positive youth development researchers have to work out strategies that can promote children and adolescent prevention work at the regional, national, and global contexts. As we have argued, development of positive youth development programs is a promising direction to promote adolescent holistic development and to reduce adolescent risk behavior.

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Development of a Positive Youth Development Subject in a University Context

Daniel T.L. Shek

Introduction

Research shows that there are many developmental issues in university students. In a review of the developmental issues in university students, Shek and Wong (2011) pointed out that suicide, depression, alcoholism, substance abuse, and egocentric behavior of university students are issues to be addressed. With particular reference to Hong Kong, Shek (2010) similarly suggested that psychological morbidity and lack of psychosocial competencies as well as interpersonal skills are developmental problems in university students. In a recent review of developmental concerns in university students, Shek and Cheung (2013) pointed out that there are behavioral and lifestyle issues, mental health problems, and concerns about self-confidence, materialistic and pragmatic values, and civic responsibilities in university students in Hong Kong.

How can we help university students to thrive? This is an important question especially when there are research findings showing that risk behavior in high school students is not trivial. In addition, as adolescent developmental issues will not disappear overnight (Shek & Wong, 2011), universities have a clear

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responsibility to help students to develop holistically. In the field of positive youth development, focus is put on youth talents, potentials, and competencies instead of solely on adolescent developmental problems. Benson (1997) highlighted the importance of developing 40 internal and external developmental assets for adolescents, such as sense of purpose, self-esteem, and positive view of personal future. Weissberg and O'Brien (2004) similarly proposed that it is important to promote social-emotional competencies in young people, such as self-awareness, social awareness, self-management, relationship skills, and responsible actions. One major argument in the field of positive youth development is that by building up developmental assets of young people, adolescents will thrive and risk behavior will decrease. There are studies showing that positive youth development predicts adolescent risk behavior via the influence of life satisfaction (Sun & Shek, 2010, 2012a, 2012b).

At The Hong Kong Polytechnic University (PolyU), students admitted under the New Undergraduate Curriculum in 2012 are required to complete a requirement on "Leadership and Intrapersonal Development." To help students fulfill this requirement, a subject entitled "Tomorrow's Leaders" was developed. After taking this subject, it is expected that the students will (a) understand and integrate theories, research, and concepts on the basic qualities (particularly intrapersonal and interpersonal qualities) of effective leaders in the Chinese context; (b) develop awareness and understanding of oneself; (c) acquire interpersonal skills; (d) develop self-reflection skills in their learning; and (e) recognize the importance of an active pursuit of knowledge on intrapersonal and interpersonal leadership qualities. Several positive youth development constructs selected from those covered in the Project P.A.T.H.S. are included in this subject (Shek, 2012; Shek et al., 2012).

The subject was offered to four classes of students in 2010–2011 school year (Pilot Study 1), with 268 students taking the subject. In 2011–2012 school year (Pilot Study 2), 195 students in 4 classes took the subject. Systematic evaluations using different evaluation mechanisms, including objective outcome evaluation, post-lecture subjective outcome evaluation, post-course subjective outcome evaluation, process evaluation, and qualitative evaluation, were carried out. For the first pilot exercise, evaluation findings showed that the subject, teachers, and benefits were perceived favorably and the students showed positive changes after taking the subject (Shek & Sun, 2012a, 2012b, 2012c, 2012d, 2012e). Similar positive evaluation findings were found for the second pilot exercise (Shek, 2013; Shek & Sun, 2013a, 2013b, 2013c; Shek et al., 2013). Although qualitative data were collected and related findings were published, it would be interesting to understand the narratives of the students. In this chapter, reflections of the students collected in the second pilot exercise regarding the subject, teachers, and benefits are presented. It is hoped that through such thick descriptions, the readers can get a better picture about the subject.

The Subject Is Different

- "Before participating in this General Education (GE) subject, I had certain views towards this kind of subject. I thought that it should be a lecture that only encourages you to talk or share your experience or point of view. However, when I actually took this subject, I found that there were indeed some concrete skills that we could learn about for certain areas in our daily lives, for example, communication, leadership, and social interaction. All of these skills will be very useful to our future lives. As I had learnt psychology in the Department of Applied Social Sciences, I also found that there are some similarities between this subject 'Tomorrow's Leaders' and psychology. In my point of view, psychology includes many areas and has more detailed information about human's intelligence theoretically, but in this subject, I can actually learn skills that are somehow related to psychology and are really useful in my daily life. Overall, the skills learnt in this subject are very practical. Also, one thing about the activities held during each lesson—I like them. The activities were quite creative and interesting which made 'Tomorrow's Leaders' very different from other subjects. For example, bringing peanuts to lectures as an exercise was quite a fresh idea and funny. It made other classmates want to join as well. So, I think that the activities can actually be held for a longer period of time. If the activities are meaningful, they can be held for a longer time instead of focusing on concepts that are in fact practical skills…. In general, I like this subject and it is especially suitable for university students who are preparing to be pillars of the society in the future." (LEC 001-05)
- "'Tomorrow's Leaders' was the first GE course I took at PolyU. I think I have chosen a very suitable course, since the subject contexts were interesting, and the lectures were very interactive. During lectures, we had opportunities for discussions and even role plays. It was not as dull as other classes. The staff members were very helpful in assisting us to understand the things taught, and encouraged us to speak up by offering us gifts. I like this style of learning very much. The workload of the subject was acceptable, thus increasing the incentive for us to pick this course. Besides, as there was no test or examination, the pressure for completing this subject was limited. In conclusion, I really like this course and will recommend it to other classmates." (LEC 004-104)
- "'Tomorrow's Leaders' was really an interesting GE subject and I am glad that I chose it for my Year 2 study. This course introduced many attributes of an effective leader, which was pretty meaningful. After my Year 1 study in PolyU, I wanted to know what leadership characteristics I had achieved and what aspects I had to improve. Hence, this program provided opportunities for me to self-reflect in different aspects. In fact, the teaching atmosphere of this subject was great too. We were encouraged to voice our opinions during the lecture, which is

not common in other subjects. The teaching style and skills of the lecturer were good and he could deliver his messages clearly. I enjoyed the discussion and in-class activities very much and they helped me to concentrate on the lessons. To conclude, this subject raised my interests in knowing myself and different attributes of a leader." (LEC 001-09)

Interesting Teaching and Learning Formats

- "The lectures taught me something more about my personal development in terms of how to cope with different situations that are very likely to happen in my life. In our lectures, we had been given much time to do self-reflections that I am not used to. Rather than academic knowledge which we can learn in university, I think it is more important for us to know how to get along with our friends, family or colleagues in the future. This kind of knowledge can lead to a happy life and a successful career. I think this lesson is our first step to become successful leaders. I love the idea of each one being given the opportunity to take turns to be a leader within our group. In the past, I never dared to be the leader of a group. This opportunity thus allowed me to try. This experience made me more confident and increased my determination to be a good leader.

  Last but not least, I think that the teaching method was good. All the interactive activities made us understand the lectures. In the past, I always thought that I am right in every case. However, after this course, I found that there are actually many methods for us to solve problems and to regulate our emotions. When I face an emergency in my life, I can logically consider my decision on how to express my emotion and face the difficulties positively. 'Obstacles' are unavoidable in our lives. However, knowing how to face them and a positive mindset can help me go through them in my life. This is the most valuable thing that I have learned from the subject." (LEC 003-62)

- "I chose this subject at the beginning because of its name—'Tomorrow's Leaders'. It attracted my attention as I would like to be an effective leader in every aspect, for example, academically and personally. I expected the lessons to teach the qualities and components of a leader. After taking the lessons in previous weeks, I felt that it was very meaningful, because it helped me think about what a leader should have including self-management, as well as how to cooperate with others. In the lectures, I discussed my feelings and shared my experience with my group mates, and expressing my thoughts from the bottom of my heart made me relaxed. It was also interesting that I understood my friends more by listening to their shared opinions on their activities in class. Also, I encountered some problems and issues that I never thought that I would encounter in this subject, such as the dilemma of choosing between ethics or personal interests and a scenario of the flight accident in Southern Canada that allowed us to choose 5 things for survival. These activities stimulated my thoughts on daily life and personal pursuit. How can I achieve the goal by improving my personality and other abilities instead of just talking about it as a dream? I did a lot of reflection

when the lecturers raised the questions. I think this subject really helped me to become a leader by encouraging me to think about my own self and reflect on my weaknesses and also on things that I never thought of. Besides, I developed a better relationship with others after the discussions and group projects. Because we all are leaders, we respected each other and encouraged others to talk. Also, we were willing to accept others' opinions, as our perceptions changed after attending the lessons." (LEC 003-67)

- "Thinking back, I was just attracted by the title of the course. At first, I thought it was like other regular lectures where we would just sit and listen to the professors. However, I was surprised afterwards. It was not like other leadership courses where they would only spend a few hours on a topic, and then say that you are already equipped with the capability of a leader. Instead, the course led us to the path of 'leadership' step by step. In the course, a lot of reflection was done in different aspects and areas. Not only can it help with our future paths to leadership, it can also become an asset in our lives. In the past, I did not understand myself. I often relied on others' opinions in order to study myself. Conversely, after taking a few lectures from the course, I learnt how to study myself as well as others. Especially when the topic 'empathy' was introduced, I realized that I had never put myself in anybody's shoes. That has become an impressive lecture. I also appreciated the fascinating interactions between lecturers. They showed their concerns outside classes as well. There was an incident when the classmates faced a dilemma between friendship and morality. Fortunately, the lecturers gave them advice, and then they were able to solve the problem. I am not declaring that you could become a great leader after those lectures, but the course definitely gave me confidence to face challenges in the future. No matter how hard it is, I am well-prepared to face the adversity. I am glad that I had taken this course, which allowed me to become a person who has high self-confidence." (LEC 003-54)

- "The subject brought colors to my ordinary college life. Group activities and sharing not only gave us chances to open up ourselves, but also chances to reflect, to link reasons or theories to our doubts (i.e., when you know that something is not right but are not too sure what's wrong with you or how to explain it). In my point of view, those who enrolled in this class more or less have the traits of a leader. Therefore, the group as a whole was easygoing. If this class were offered to a wider range of people, it might not have an atmosphere as good as this class. But generally, as a leader myself, the subject helped me to know/reminded me what I need to be aware of as an effective leader: not only is one's attitude to others important, knowing the techniques is also vital. Therefore, I'm grateful that I enrolled in this course." (LEC 002-30)

Wonderful Teachers

- "'Tomorrow's Leaders' is a special subject to me because in every lecture, we would be given a lot of time to do reflections and discussions. Through discussions, I could have the opportunity to reflect on myself, thus helping me to

develop. Every time, the lecturer would use different kinds of creative activities to help us discuss, so I would really enjoy them. This course not only provided a lot of knowledge on how to be a good leader in different aspects, but also provided a chance for my personal growth. In university, many courses are just informative and factual, but this course is more interactive and interesting. The lecturer gave us a lot of encouragement and support in the class, which is a good demonstration of how to be a good leader. Therefore, I think this course is valuable and worthwhile to take. Being a good leader is useful, but being a good leader of oneself is more difficult. This course can help us do it." (LEC 002-37)

- "Being a freshman of PolyU, I felt doubtful about my new school life. When I first began to think of the question of 'what is a leader?' I thought that a leader is a person who possesses strong leadership and competences. But after 3 months of studying APSS2816, I was proven wrong because there are more things to a successful leader than what I originally thought. The course explained intra- and inter-personal competencies with illustrations of theories and models. To facilitate our learning proficiencies, different kinds of interactive group activities were provided for us to get a better understanding on the subject. In addition, self-reflections were provided as a common session for us to evaluate what we learnt in every lecture. And now I am confident to say I am ready to be one of tomorrow's leaders!

  Lecturers and teaching assistants meant a lot to me. Their kind help and thoughtful teachings created a friendly learning environment. Their advice enabled us to do the project/assignments effectively. May I send my warmest blessings to Dr. Yu, Yammy, Moon and Kaman for their contributions to the subject APSS2816 and my personal improvement? All in all, 'Tomorrow's Leaders' helped me explore my potentials and talents, as well as identified my weaknesses and ways to improve. It helped me to think systematically. 'Stop and Think', 'Observe and Learn', 'Select and Go' to obtain my goal. It's time for our tomorrow's leaders to experience the 'mystique' of APSS2816, which I bet is the best GE course!" (LEC 003-50)

- "Obviously, this subject ('Tomorrow's Leaders') brought us a lot of meaningful skills that can be applied to our daily lives. One of the essential things that we need in order to survive in the society is to make sure that we can obtain certain abilities. Our professors provided us with a good lesson to let us know more about ourselves. They encouraged us to become clear about our personalities, characters, and even abilities. Therefore, we had to plan out how to upgrade ourselves in order to improve. I believe that after the lectures, every one of us can become a popular and excellent leader, and that we can have a brilliant prospect.

  Furthermore, regarding our professors, they have put in invaluable amounts of effort in order to let us acquire lots of unlimited but meaningful knowledge. It is not easy to attract all of our attention. However, they have done it well. Everyone liked to listen to them when they were teaching. Also, we participated actively when we had time to discuss. All in all, they have provided us with not only knowledge, but also entertainment. I believe everyone in the class have experienced a lot.

  Regarding myself, after thinking about the course, I find that it provided a good introduction to various leadership traits and allowed us to reflect on ourselves. I expect that everyone will have a brilliant prospect. Besides, I have made a lot of

friends in the class. Although we study in different disciplines, we can still build up a wide friendship network. It is one of the meaningful things that I have got in the course. Therefore, I would like to recommend this lecture to all of you. After the lecture, you could become a successful leader!" (LEC 004-95)

- "It was beneficial for me to take the General Education (GE) courses in the past semester, especially the course, 'Tomorrow's Leaders', which was taught by Dr. Allen Dorcas. Previously, my concept of an excellent leader was mainly concentrated on outstanding managerial skills and leadership style. Nevertheless, this course led me to discern entirely new concepts, ideas and methods about it. Dr. Dorcas said that leadership is to explore the inner core of self-development, including self-understanding, self-enhancement, as well as interpersonal skills. He also used this train of thoughts to interpret the whole process on how to develop and cultivate ourselves to become absolute leaders. The course advised a different approach to becoming a leader, and provided an opportunity for me to reconsider leadership; this was the major insight I learnt through the course.

  Now I would like to talk about the most significant change that this course has brought me: to learn to live correctly and positively. My dearest father passed away due to a failed cancer treatment when I was 17 years old. It was a significant vicissitude of my life. In the same year, there was also another important change in my life since I had to prepare very well for the Mainland China public examination in my last year of high school life. Although I passed the examination, I was haunted by fidgety emotions for the next two years. I sometimes cried in the middle of the night because I missed my father. I also felt weakened because I lacked his support when faced with difficulties in life. Later, I chose to take this subject in order to reconsider my life. The idea Dr. Dorcas taught us the most in the lectures is how to possess a positive and active attitude regarding life. Through discussions and reflections during the lectures, I adjusted my thinking continuously. With the pain fading away gradually within these 2 years, in addition to the patience and encouragement of Dr. Dorcas, I passed through the haze, and got to re-understand and self-reflect on my life. I converted the pain of my father's death to an impetus to go forward positively." (LEC 001-07)

The Subject Is Very Helpful!

- "Most people would like to be a leader in the workplace. Certainly, I am one of them. But how can I be a good leader? Learning from both good and bad leaders is a good way to establish my own leadership style. Besides learning from experience, the 'Tomorrow's Leaders' Program provided me with a useful guideline to realize which leadership traits I have. In the program, the most meaningful topic for me was 'Cognitive Competence'. As I am weak in memory, it may directly affect my cognitive ability. However, I got encouraged when Dr. Ma explained the meta-cognitive skills through 'thinking of thinking' to us. These meta-cognitive skills may affect the problem-solving process and offer an

important channel for learning, experiencing and explaining the solution process. I can improve my cognitive competence through thinking 'why', e.g., knowing my goal or purpose in certain situations. Therefore, it was really a valuable subject for me to learn, to broaden my horizon, to develop my skills and to meet people. The class activities were very well-organized and interactive!" (LEC 004-82)

- "After finishing this course, I realized that leadership is not as simple as I used to think. It is related to many other social skills such as emotions, resilience and even ethics. This course covered a wide range of qualities of effective leaders and gave me a better sense of myself. Knowing my weaknesses and strengths from class activities made me know what to improve on in order to be an effective leader. Besides, I learnt to express myself more as this course gave us many chances to share with our group mates about leadership traits. In daily lives, we seldom evaluate our emotions or relationships with other people." (LEC 002-31)

- "I think this GE subject is worth studying as the lectures talked about many important issues that may affect our lives. All the topics covered are positively inspiring to me. As this subject is a more practical one, it's easier for me to learn. Topics like self-understanding inspired me the most. Before studying this topic, I thought I understood myself very much. However, after the lecture, I realized that I only understand myself now. It's common for someone to just look at one's strengths and avoid recognizing one's weaknesses. This topic made me stand up and bravely face my weaknesses. Only by overcoming those weaknesses can my life be changed in a better way. So, after learning this topic, I found my way.

  'Empathy' is another topic that had a positive effect on me. In real life, I always play the role of a leader. I used to give much pressure to my team mates and would ask them to submit the assignment within 2–3 days after our meeting. This is because I thought that only stress can motivate them to work harder. However, I seldom considered their workload and made them upset and too stressed. Luckily, I learnt how important 'empathy' is, so I'm becoming more flexible and care about my group mates' feelings more." (LEC 003-61)

- "For me, I think this subject was really useful in promoting me to be a leader. It let me know what qualities a leader should have. As a result, I have started to think about whether I have these qualities or not. For example, I know I have good emotional competence. Also, I know I have low ethical level. So, I know I have to do something to improve my ethical level. This course also enabled me to know more about myself. It helped me know myself and think about what qualities I lack. It made me know that I am not good at social cognition. I used to respect others' wants and needs without thinking about myself. Yet this act would make me stressed afterwards. For the lecturers, I think they were all very professional. They all really knew a lot about the topics covered. They tried their best to make the class interactive and made the abstract concepts easier to understand. For example, the role plays and mini-games in class were really inspiring and made me understand the topics more.

  I really enjoyed this course. This course can help equip a student before entering into the society. Leadership is an important quality for making a person

successful. I suggest that the APSS department should have more personal development programs for GE subjects as these courses are more useful in facilitating the well-rounded personal development for students." (LEC 003-66)

- "I'm a Year 3 student. The reason why I chose 'Tomorrow's Leaders' to study as a General Education course was because of its $5000 scholarship. Although I don't think I am capable of getting this scholarship, I still think it's worthwhile to join this course. An aspect of this course that I liked the most was the format of the lecture. The lecturer would first teach us some models or theories of a particular topic, and then some games would be provided for us so that we could learn more through playing the games. Sometimes, when we did not know the concept, the lecturer would come to us and teach us patiently, which really impressed me a lot. From my own experience, lecturers seldom come to students during class. Therefore, this probably helped us understand more about the topics. Also, the topics covered were interesting and they were good for our personal development. The most important thing was that we can know more about ourselves, both the strengths and weaknesses." (LEC 004-79)

- "I enjoyed this course very much and I think it is very useful to my study as well as my personal growth. As a nurse-to-be, I must first understand myself before I can help and develop a good therapeutic relationship with my patients. This course helped me to explore my potentials and gave me chances to express my views. It also gave me insights into the key elements of a good leader. Although I may not be a leader in the future, I can still be a better person and have more confidence in myself as I know what I am capable of through this course. The subject can help me in everyday activities and also my future. I have learnt that this course will be made compulsory for all freshmen next year and I think they are very lucky. People nowadays often focus on one's weaknesses but rarely the strengths and talents. This course allows them to reflect on themselves and hence improve themselves." (LEC 004-87)

- "I took this subject as my General Education (GE) study when entering the Polytechnic University. This subject alerted me to a lot of things, including the things in my daily life and my career in the future. As a student of the School of Nursing, I will become a leader in the society and take on the responsibility to save others' lives. In order to exercise the individual rights effectively, in addition to my professional knowledge, the ability to be a leader is also necessary. Through this course, I know more about myself. There were a lot of reflection sessions in the course, leading me to reflect in every lesson. I tried to apply the theories learned in the lectures to explain my characteristics, behavior, and the things that happened around me. I learned how to improve and reflect through understanding.

    It was beneficial for me to take the lesson on communication. I thought I did not have any communication problems before. However, when the topic of how to face others' unpleasantness or sadness was mentioned, I did not know how to respond. I misunderstood that I can help by simply providing reasonable analysis and solutions, ignoring the importance of showing my understanding to my

friends and peers, which would allow them to feel acknowledged, and thus start to consider facing their problems." (LEC 003-46)

• "The teaching style of 'Tomorrow's Leaders' was different from other traditional courses. It did not focus on the transmission of knowledge. Rather, it taught us 'how to get along with others', 'EQ', 'AQ', etc. These are exactly what today's teenagers are lacking, which are also the requirements of the community. Cao Xue-qin once said, 'If you understand everything in the world, you will find knowledge everywhere; if you understand every person, you will find stories.' I am not asserting that I have comprehended his words thoroughly; otherwise you would find me exaggerating. Moreover, (cultivated) resilience can also depend on congenital factors, as well as the acquired experience of the student. Strictly speaking, it cannot be 'taught'. But 'Tomorrow's Leaders' can act as an introduction, an executive producer and an inspiration. Though the theories and insights learnt at school are all left behind as soon as the students are done with class, it is hoped that when we enter the society, we can at least distinguish right from wrong, and be a good person. In the materialistic and intriguing society, one can be different from others. How wonderful is this subject! Fortunately, academics can learn this from this course." (LEC 004-78)

What Do We Learn from the Two Pilot Exercises?

Although positive youth development programs are very popular in the high school settings, such programs are rare in higher education. In this chapter, the reported narratives suggest that the use of a credit-bearing subject to promote the holistic development of university students is a promising approach (Shek & Wong, 2011). The related evaluation highlights the importance of nurturing psychosocial competence through positive youth development programs such as the Project P.A.T.H.S. To promote holistic development among Hong Kong adolescents, the Hong Kong Jockey Club Charities Trust launched a project entitled "P.A.T.H.S. to Adulthood: A Jockey Club Youth Enhancement Scheme" (the Project P.A.T.H.S.), with an aggregated earmarked grant of HK$750 million. Evaluation based on different strategies showed that the project was able to promote holistic development and reduce risk behavior in early adolescents (Catalano et al., 2012). The subject "Tomorrow's Leaders" can be regarded as a university version of the Project P.A.T.H.S. which underscores the importance of positive youth development constructs and programs.

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Impact of the Project P.A.T.H.S. in China

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Introduction

With rapid industrialization and urbanization in China, Chinese adolescents are facing many challenges and developmental issues. Using the General Health Questionnaire, Fan, Chen, Chen, and Wu (2001) showed that the rate of the students who could be classified as "psychologically at risk" was 11.2 % in Beijing, although the rate was lower than Hong Kong (14.5 %). Cheng et al. (2005) examined suicide attempt in 9,015 students from 100 junior secondary schools in four cities in China. The results showed that 17.4 % of the students had seriously considered committing suicide and 8.2 % had planned to commit suicide in the past 12 months. Based on a survey of 16,580 Secondary 1 and Secondary 4 students from 40 secondary schools in five cities in mainland China, Sun, Song, and Ma (2001) showed that 6.8 % of the students had used illegal drugs. Using Young's Internet Addiction Scale, Wang, Wang, and Fu (2008) reported that among 31,915 students from 10 provinces in China, the rates of Internet addiction for high school students ranged between 6.2 and 8.4 %. Wen, Li, and Ma (2005) used Rokeach's Value Survey to investigate the values of

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1,080 students from 7 cities in China. The results suggested that compared with the 1980s, adolescents had changed to become more individual-oriented, where ambition and sense of accomplishment were gradually replaced by personal pleasure and happiness. There are also concerns regarding the materialistic orientations among adolescents in mainland China (Shek et al., in press).

How can and should we respond to the growing developmental issues in Chinese adolescents? Of course, we can develop prevention programs for adolescents. While there is much advancement in the field of prevention science in the past decades, there are several difficulties of implementing adolescent prevention programs in the school contexts. First, with reference to the diverse range of adolescent developmental issues, there is a need for a wide range of prevention programs, such as anti-smoking programs, anti-drug programs, anti-bullying programs, and anti-net addiction programs. The list can be a very long one. Second, in view of the limited school time, it is always impossible for schools to squeeze enough regular class time for the programs. Third, prevention programs normally do not receive support from the parents because they are stigmatizing in nature. In view of these problems, positive youth development programs may be a better starting point. Instead of focusing on adolescent developmental issues, positive youth development programs put the emphasis on promoting the life skills, particularly psychosocial competencies, of the students. The basic argument is that if we can promote the inner strengths and capacities of the program participants, adolescent risk behavior will be less likely to develop. Interestingly, the basic thesis of positive youth development is consistent with the view of Chinese medicine that by strengthening the inner bodily and psychic strengths, it is not easy to get sick.

In a review of adolescent prevention and youth development programs in different Chinese contexts, Shek and Yu (2011) showed that validated programs almost do not exist. This conclusion is also reached in a recent review of effective adolescent prevention and positive youth development programs (Catalano et al., 2012). The only effective adolescent positive youth development program cited in this chapter is Project P.A.T.H.S. in Hong Kong. The Project P.A.T.H.S. is a holistic youth enhancement program initiated and financially supported by the Hong Kong Jockey Club Charities Trust, with an earmarked grant of HK$750 million for the initial and extension phases of the project. Findings based on different evaluation mechanisms consistently showed that the project was able to promote holistic youth development and reduce adolescent risk behavior (Shek, 2012a, 2012b; Shek & Ma, 2012a; Shek & Sun, 2012a; Shek & Yu, 2012b). Hence, transplanting the Project P.A.T.H.S. to mainland China is an attractive solution for the growing adolescent developmental problems in China.

The Tier 1 Program of the Project P.A.T.H.S. was transplanted to Mei Lung Secondary School in Shanghai for 3 years with very positive results (Shek, Han, & Ma, 2009). As the result of the initial implementation was very encouraging, Tin Ka Ping Foundation decided to conduct a pilot project in four schools in East China. With reference to the objective outcome evaluation findings based on the first year of program implementation, the findings were very positive (Shek et al., in press).

Based on a quasi-experimental design where the experimental schools and control schools were basically equivalent in terms of pretest measures, analyses of the posttest data showed that students in the experimental schools performed better than did students in the control schools in terms of their holistic development.

Besides objective outcome evaluation, several other evaluation mechanisms including subjective outcome evaluation based on the students, subjective outcome evaluation based on the teachers, process evaluation, and interim evaluation were carried out. In this chapter, findings based on these evaluation strategies in the first year of program implementation are presented.

Evaluation Mechanism 1: Subjective Outcome Evaluation by Students

In the school year 2011–2012, a total of 1,050 students from the four schools participated in the project (183 students from School A, 345 from School B, 243 from School C, and 279 from School D). The mean number of students per school was 262.5. After the completion of the program, all participants were invited to respond to a Subjective Outcome Evaluation Form for Students (Form A). A total of 1,050 questionnaires were collected. The response rate was 100 %.

The Subjective Outcome Evaluation Form for Students (Form A) has been repeatedly shown to have excellent psychometric properties (Shek & Sun, 2012b). Broadly speaking, there are several parts in this evaluation form as follows:

- Participants' perceptions of the program (10 items)
- Participants' perceptions of the program implementers (10 items)
- Participants' perceptions of the effectiveness of the program (16 items)
- The extent to which the participants would recommend the program to other people with similar needs (1 item)
- The extent to which the participants would join similar programs in the future (1 item)
- Overall satisfaction with the program (1 item)
- Four open-ended questions, such as things that the participants learned from the program and things that the participants appreciated most

Several observations can be highlighted from the findings based on percentage analyses (Table 1). First, the participants generally felt that there were clear objectives of the curriculum, much interaction among students, and well-planned teaching activities. Roughly 90 % of the participants had positive general evaluation of the program. Second, a high proportion of the participants had positive evaluation of implementers' performance. For example, more than 90 % of the participants felt that the implementers were very involved, ready to help them when needed, encouraged them to participate in activities, and well prepared for the lessons. Third, the participants overwhelmingly regarded the program as able to promote their development, including

Table 1 Program participants' subjective outcome evaluation of the TKP Project at different schools

	Respondents with positive responses						
	School A		School B		School C		School D	
	n	%	n	%	n	%	n	%
Views about the program								
1. The objectives of the curriculum are very clear	179	98.35	318	93.26	232	95.47	271	97.13
2. The design of the curriculum is very good	179	98.35	309	90.62	231	95.45	270	96.77
3. The activities were carefully planned	179	98.35	311	91.47	232	95.87	267	96.04
4. The classroom atmosphere was very pleasant	177	97.79	290	85.55	229	95.02	261	93.55
5. There was much peer interaction among the students	174	96.67	296	88.36	232	96.27	259	94.18
6. I participated actively during lessons (including discussions, sharing, games)	172	95.03	306	90.00	231	95.06	263	94.95
7. I was encouraged to do my best	174	95.60	295	87.28	232	95.87	262	94.24
8. The learning experience I encountered enhanced my interest toward the lessons	175	96.15	296	88.62	232	95.47	266	95.68
9. Overall speaking, I have very positive evaluation of the program	175	96.15	296	87.32	229	94.24	263	94.60
10. On the whole, I like this curriculum very much	176	96.70	302	89.35	232	95.47	267	95.70
Views about the instructors								
11. The instructors have a good mastery of the curriculum	179	98.35	321	94.13	234	96.30	271	97.13
12. The instructors were well prepared for the lessons	179	98.35	317	92.96	235	96.71	271	97.13
13. The instructors' teaching skills were good	179	98.35	320	93.84	235	96.71	269	96.42
14. The instructors showed good professional attitudes	178	98.34	319	94.10	234	96.30	268	96.06
15. The instructors were very involved	179	98.35	325	96.44	237	97.53	271	97.13
16. The instructors encouraged students to participate in the activities	178	98.34	326	96.45	233	96.28	270	96.77
17. The instructors cared for the students	179	98.35	326	95.60	235	96.71	272	97.49
18. The instructors were ready to offer help to students when needed	179	98.35	330	97.06	233	95.88	271	97.13
19. The instructors had much interaction with the students	179	98.35	318	93.81	232	95.47	269	96.76
20. Overall speaking, I have very positive evaluation of the instructors	179	98.35	325	95.31	235	96.71	267	96.04

Perceived effectiveness of the program

21. It has strengthened my bonding with teachers, classmates, and my family	173	95.05	296	87.57	229	94.63	265	94.98
22. It has strengthened my resilience in adverse conditions	172	94.51	298	88.17	233	95.88	263	94.27
23. It has enhanced my social competence	172	94.51	319	94.38	232	95.87	270	97.12
24. It has improved my ability in handling and expressing my emotions	174	95.60	322	95.27	234	96.30	268	96.40
25. It has enhanced my cognitive competence	172	95.03	313	92.60	235	96.71	271	97.48
26. My ability to resist harmful influences has been improved	173	95.05	309	92.24	233	96.28	273	97.85
27. It has strengthened my ability to distinguish between the good and the bad	173	95.05	322	94.99	235	96.71	273	98.56
28. It has increased my competence in making sensible and wise choices	171	94.48	308	92.22	234	96.30	273	97.85
29. It has helped me to have life reflections	164	90.11	297	87.61	232	95.47	272	97.49
30. It has reinforced my self-confidence	176	96.70	308	90.86	232	95.47	270	97.12
31. It has increased my self-awareness	170	93.41	312	92.04	228	93.83	272	97.84
32. It has helped me to face the future with a positive attitude	174	95.60	309	91.96	234	96.30	271	97.48
33. It has helped me to cultivate compassion and care about others	175	96.69	307	91.37	230	94.65	267	96.39
34. It has encouraged me to care about the community	164	90.11	285	85.07	232	95.47	260	93.86
35. It has promoted my sense of responsibility in serving the society	173	95.05	298	88.17	232	95.47	271	97.48
36. It has enriched my overall development	175	96.15	315	92.65	236	97.12	272	97.49

Others

37. I would suggest my friends to join this course	169	93.89	310	91.99	228	93.83	270	97.12
38. I would participate in similar courses again in the future	168	93.33	298	88.69	234	96.69	267	96.04
39. On the whole, I was satisfied with this course	176	97.24	307	94.75	227	98.70	270	97.47

Notes: Items 1–20 are on a 6-point Likert scale with 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=strongly agree. Only respondents with positive responses (options 4–6) are shown in the table

Items 21–36 are on a 5-point Likert scale with 1=unhelpful, 2=not very helpful, 3=slightly helpful, 4=helpful, 5=very helpful. Only respondents with positive responses (options 3–5) are shown in the table

Items 37–38 are on a 4-point Likert scale with 1=definitely will not suggest/participate, 2=will not suggest/participate, 3=will suggest/participate, 4=definitely will suggest/participate. Only respondents with positive responses (options 3–4) are shown in the table

Item 39 is on a 6-point Likert scale with 1=very dissatisfied, 2=moderately dissatisfied, 3=dissatisfied, 4=satisfied, 5=moderately satisfied, 6=very satisfied. Only respondents with positive responses (options 4–6) are shown in the table

moral competence, compassion, social competence, resilience, self-confidence, and overall development. Fourth, more than 90 % of the participants would recommend the program to students with similar needs. Fifth, more than 90 % of the participants expressed that they would participate in similar courses again in the future. Finally, roughly 95 % of the respondents were on the whole satisfied with the program. Overall speaking, the students had positive evaluation of the program, implementers, and benefits of the program.

Evaluation Mechanism 2: Subjective Outcome Evaluation by Implementers

After completion of the program, the implementers were invited to respond to a Subjective Outcome Evaluation Form for Instructors (Form B). In the first year of implementation, a total of 26 teachers participated in the survey; 5 of them were from School A, 12 from School B, 4 from School C, and 5 from School D. The response rate was 100 %.

The Subjective Outcome Evaluation Form for Instructors (Shek & Ma, 2012b) has several parts as follows:

- Program implementers' perceptions of the program (10 items)
- Program implementers' perceptions of their own practice (10 items)
- Implementers' perceptions of the effectiveness of the program on students (16 items)
- The extent to which the implementers would recommend the program to other students with similar needs (1 item)
- The extent to which the implementers would teach similar programs in the future (1 item)
- The extent to which the program implementation has helped the implementers' professional growth (1 item)
- Four open-ended questions, such as things that the implementers obtained from the program and things that the implementers appreciated most

Quantitative findings based on the closed-ended questions are presented in this chapter. Several observations can be highlighted from the findings reported in Table 2. First, the program implementers generally felt that the program was excellent, which had clear objectives, strong and sound theoretical support, and well-planned teaching activities. The classroom atmosphere and student interaction were also perceived in a positive manner. Second, a high proportion of the implementers had positive evaluation of their own performance, but there was some variation among schools. Generally speaking, the implementers perceived that they were ready to help and care for their students. Most of them believed that they had good professional attitudes. Third, almost all implementers perceived that the program promoted the development of students, including their psychosocial competencies (such as cognitive competence, social competence, emotional competence, and moral

Table 2 Program implementers' subjective outcome evaluation of the TKP Project at different schools

	Respondents with positive responses							
	School A		School B		School C		School D	
	n	%	n	%	n	%	n	%
Views about the program								
1. The objectives of the curriculum are very clear	5	100.00	12	100.00	5	100.00	3	75.00
2. The design of the curriculum is very good	5	100.00	12	100.00	5	100.00	3	75.00
3. The activities were carefully planned	5	100.00	12	100.00	5	100.00	3	75.00
4. The classroom atmosphere was very pleasant	5	100.00	12	100.00	5	100.00	2	66.67
5. There was much peer interaction among the students	5	100.00	12	100.00	5	100.00	3	75.00
6. I participated actively during lessons (including discussions, sharing, games)	5	100.00	12	100.00	5	100.00	3	75.00
7. I was encouraged to do my best	5	100.00	12	100.00	5	100.00	2	50.00
8. The learning experience I encountered enhanced my interest toward the lessons	4	80.00	12	100.00	5	100.00	3	75.00
9. Overall speaking, I have very positive evaluation of the program	5	100.00	12	100.00	5	100.00	3	75.00
10. On the whole, I like this curriculum very much	5	100.00	12	100.00	5	100.00	3	75.00
Views about instructors								
11. I have a good mastery of the curriculum	5	100.00	11	91.67	5	100.00	3	75.00
12. I prepared well for the lessons	5	100.00	12	100.00	5	100.00	3	75.00
13. My teaching skills were good	5	100.00	12	100.00	4	80.00	3	75.00
14. I have good professional attitudes	5	100.00	12	100.00	5	100.00	3	75.00
15. I was very involved	5	100.00	12	100.00	5	100.00	3	75.00
16. I gained a lot during the course of instruction	5	100.00	12	100.00	5	100.00	3	75.00
17. I cared for the students	5	100.00	12	100.00	5	100.00	3	75.00
18. I was ready to offer help to students when needed	5	100.00	11	100.00	5	100.00	3	75.00
19. I had much interaction with the students	5	100.00	12	100.00	5	100.00	3	75.00
20. Overall speaking, I have very positive evaluation of myself as an instructor	5	100.00	12	100.00	5	100.00	3	75.00

(continued)

Table 2 (continued)

	Respondents with positive responses							
	School A		School B		School C		School D	
	n	%	n	%	n	%	n	%
Perceived effectiveness of the program								
21. It has strengthened students' bonding with teachers, classmates, and their families	4	100.00	12	100.00	5	100.00	4	100.00
22. It has strengthened students' resilience in adverse conditions	4	80.00	12	100.00	5	100.00	4	100.00
23. It has enhanced students' social competence	5	100.00	12	100.00	5	100.00	4	100.00
24. It has improved students' ability in handling and expressing emotions	5	100.00	12	100.00	5	100.00	4	100.00
25. It has enhanced students' cognitive competence	5	100.00	12	100.00	5	100.00	4	100.00
26. Students' ability to resist harmful influences has been improved	5	100.00	12	100.00	5	100.00	4	100.00
27. It has strengthened students' ability to distinguish between the good and the bad	4	100.00	12	100.00	5	100.00	4	100.00
28. It has increased students' competence in making sensible and wise choices	4	80.00	12	100.00	5	100.00	4	100.00
29. It has helped students to have life reflections	4	80.00	12	100.00	5	100.00	4	100.00
30. It has reinforced students' self-confidence	5	100.00	12	100.00	5	100.00	4	100.00
31. It has increased students' self-awareness	4	80.00	12	100.00	5	100.00	4	100.00
32. It has helped students to face the future with a positive attitude	5	100.00	12	100.00	5	100.00	4	100.00
33. It has helped students to cultivate compassion and care about others	4	80.00	11	100.00	5	100.00	4	100.00
34. It has encouraged students to care about the community	3	60.00	8	66.67	5	100.00	4	100.00
35. It has promoted students' sense of responsibility in serving the society	5	100.00	12	100.00	5	100.00	4	100.00
36. It has enriched the overall development of the students	5	100.00	12	100.00	5	100.00	4	100.00
Others								
37. I would suggest students to participate in this program	5	100.00	12	100.00	5	100.00	4	100.00
38. I would teach similar programs again in the future	4	80.00	12	100.00	5	100.00	4	100.00
39. The implementation of the program has helped me in my professional growth	5	100.00	12	100.00	5	100.00	4	100.00

Notes: Items 1–20 are on a 6-point Likert scale with 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=strongly agree. Only respondents with positive responses (options 4–6) are shown in the table

Items 21–36 and 39 are on a 5-point Likert scale with 1=unhelpful, 2=not very helpful, 3=slightly helpful, 4=helpful, 5=very helpful. Only respondents with positive responses (options 3–5) are shown in the table

Items 37–38 are on a 4-point Likert scale with 1=definitely will not suggest/teach, 2=will not suggest/teach, 3=will suggest/teach, 4=definitely will suggest/teach. Only respondents with positive responses (options 3–4) are shown in the table

competence), self-understanding, life reflections, self-awareness, compassion, and overall development. Fourth, the implementers basically would recommend the program to students with similar needs. Fifth, the implementers generally expressed that they would teach similar courses again in the future. Finally, the implementers felt that the program had helped their professional development.

Evaluation Mechanism 3: Process Evaluation of Program Implementation

For process evaluation involving classroom observations, a total of 28 classes of Secondary 1 students were randomly selected from the four schools for systematic observations, including eight classes from School A, three classes from School B, ten classes from School C, and seven classes from School D. A research team from the East China Normal University conducted observations at the schools using a standardized rating form.

The standardized rating form was used by each observer to record how each teaching unit was implemented in the classroom. It comprise four major areas: basic information of the class, integration of the program with the school formal curriculum, program fidelity and adherence, and quality of program delivery. Three open-ended questions were also included in the last part of the form for the observers to fill in further information. For program fidelity and adherence, the observers were required to rate the degree of adherence and record the time used to implement the unit. The 13-item Curriculum Delivery Assessment Scale (Law & Shek, 2012) was used to measure the quality of program delivery in different areas, including student interest, student participation and involvement, classroom control, use of interactive delivery method, use of strategies to enhance student motivation, use of positive and supportive feedbacks, instructors' familiarity with the students, opportunity for reflection, degree of achievement of the objectives, time management, quality of preparation, overall implementation quality, and success of implementation. For each item, observers rated on a 7-point Likert scale ranging from 1 to 7, with a low score indicating little or no achievement on the item and a high score indicating that the item is well achieved.

Each teaching unit was observed by an observer. The observers were nine Master students majoring in Social Work from the East China Normal University. During the class, the observer rated according to their observation regarding the implementation of teaching unit, followed by a group sharing session with program implementers.

The findings based on the observations generally showed that the program was delivered in an excellent manner (Tables 3 and 4). An examination of the different areas showed that except for the use of positive and supportive feedback and opportunity for reflection, the mean ratings and the cumulative responses in the positive direction were generally high. Except for one school, success of implementation was rated on the high side.

Table 3 Means and standard deviations of the Curriculum Delivery Assessment Scale

Quality of curriculum delivery	School A (*n*=8)	School B (*n*=3)	School C (*n*=7)	School D (*n*=10)	Overall (*n* =28)
1. Student interest	6.00 (0.00)	6.67 (0.58)	6.29 (0.49)	6.20 (0.63)	6.21 (0.50)
2. Student participation and involvement	5.88 (0.64)	7.00 (0.00)	5.71 (0.95)	5.90 (1.10)	5.96 (0.92)
3. Classroom control	6.00 (0.76)	6.33 (1.15)	6.71 (0.49)	6.60 (0.52)	6.43 (0.69)
4. Interactive delivery method	5.63 (0.74)	6.67 (0.58)	5.57 (0.98)	5.10 (0.99)	5.54 (0.96)
5. Strategies to enhance student motivation	5.88 (0.35)	6.67 (0.58)	6.14 (1.07)	5.40 (1.35)	5.86 (1.04)
6. Use of positive and supportive feedback	5.38 (0.74)	6.67 (0.58)	5.86 (0.69)	5.20 (1.62)	5.57 (1.17)
7. Instructors' familiarity with the students	6.00 (0.71)	3.00 (1.41)	5.17 (1.33)	6.80 (0.63)	5.87 (1.42)
8. Opportunity for reflection	5.50 (0.93)	6.33 (0.58)	6.00 (0.82)	5.10 (1.37)	5.57 (1.10)
9. Degree of achievement of the objectives	6.00 (0.00)	6.33 (0.58)	6.14 (0.69)	5.80 (0.63)	6.00 (0.54)
10. Time management	5.88 (0.83)	6.67 (0.58)	6.33 (0.82)	5.90 (0.57)	6.07 (0.73)
11. Lesson preparation	6.25 (0.46)	7.00 (0.00)	6.83 (0.41)	6.30 (0.48)	6.48 (0.51)
12. Overall implementation quality	6.00 (0.00)	7.00 (0.00)	5.83 (0.41)	5.33 (0.71)	5.85 (0.67)
13. Success of implementation	6.13 (0.35)	7.00 (0.00)	5.83 (0.75)	5.22 (1.20)	5.85 (0.97)
Overall rating	5.89 (0.36)	6.31 (0.22)	5.96 (0.48)	5.70 (0.58)	5.87 (0.49)

Notes: For each item, observers rated on a 7-point Likert scale ranging from 1 to 7, with a low score indicating little or no achievement on the item and a high score indicating that the item is well achieved

Evaluation Mechanism 4: Interim Evaluation

To understand the program implementation process, instructors of the program were invited to participate in face-to-face interviews on a voluntary basis during a school visit. The respondents included seven teachers who implemented the program in the second semester of school year 2011–2012, with four teachers from School A and one teacher each from School B, School C, and School D. A self-constructed semi-structured interview guide with five closed-ended questions and seven open-ended questions was used to collect information on the program implementation process (Shek & Yu, 2012a).

The closed-ended questions were:

• Question 1: Perceived degree of student involvement (4-point scale)
• Question 2: Perceived degree of students' liking of the curriculum (4-point scale)
• Question 3: Perceived degree of helpfulness of the curriculum (5-point scale)
• Question 4: Perceived degree of workers' liking of the curriculum (4-point scale)
• Question 5: Perceived degree of workers' overall satisfaction with the curriculum (6-point scale)

Table 4 Percentages of positive evaluation by observers

Quality of curriculum delivery	School A (n=8)	School B (n=3)	School C (n=7)	School D (n=10)	Overall (n=28)
1. Student interest	8 (100 %)	3 (100 %)	7 (100 %)	10 (100 %)	28 (100 %)
2. Student participation and involvement	8 (100 %)	3 (100 %)	6 (85.7 %)	9 (90.0 %)	26 (92.9 %)
3. Classroom control	8 (100 %)	3 (100 %)	7 (100 %)	10 (100 %)	28 (100 %)
4. Interactive delivery method	8 (100 %)	3 (100 %)	6 (85.7 %)	8 (80 %)	25 (89.3 %)
5. Strategies to enhance student motivation	8 (100 %)	3 (100 %)	6 (85.7 %)	7 (70 %)	24 (85.7 %)
6. Use of positive and supportive feedback	7 (87.5 %)	3 (100 %)	7 (100 %)	6 (60 %)	23 (82.1 %)
7. Instructors' familiarity with the students	5 (100 %)[a]	2 (100 %)[b]	5 (83.3 %)[b]	10 (100 %)	20 (87 %)[c]
8. Opportunity for reflection	7 (87.5 %)	3 (100 %)	7 (100 %)	8 (80 %)	25 (89.3 %)
9. Degree of achievement of the objectives	8 (100 %)	3 (100 %)	7 (100 %)	10 (100 %)	28 (100 %)
10. Time management	8 (100 %)	3 (100 %)	6 (100 %)[b]	10 (100 %)	27 (100 %)[b]
11. Lesson preparation	8 (100 %)	3 (100 %)	6 (100 %)[b]	10 (100 %)	27 (100 %)[b]
12. Overall implementation quality	8 (100 %)	3 (100 %)	6 (100 %)[b]	8 (88.9 %)[b]	25 (96.2 %)[d]
13. Success of implementation	8 (100 %)	3 (100 %)	6 (100 %)[b]	6 (66.7 %)	23 (88.5 %)[d]
Overall rating	5 (100 %)[a]	2 (100 %)[b]	6 (100 %)[b]	9 (100 %)[b]	22 (100 %)[e]

Notes: Positive evaluation means observers' responses larger than 4
[a]There are three cases with missing values, so the valid percentage is still 100 %
[b]There is one case with missing value
[c]There are five cases with missing values
[d]There are two cases with missing values
[e]There are six cases with missing values

The open-ended questions were:

- Question 1: What are the responses of the students to this program?
- Question 2: Do you think this program is beneficial to the students? If yes, what are the benefits?
- Question 3: What are the good aspects of the program?
- Question 4: Which areas of the program require improvement?
- Question 5: Have you encountered any difficulties during the program implementation process? If yes, what problems have you encountered?
- Question 6: What are your perceptions of the "Co-Walker Scheme"?
- Question 7: Do you have other opinions?

The present study focused on reporting the quantitative results of the interim evaluation and the qualitative findings will be reported elsewhere (see Table 5). First, all respondents reported that students were involved in the program. Second, for students' liking of the curriculum, all teachers perceived that the students liked

Table 5 Interim evaluation for P.A.T.H.S. in seven TKP secondary schools in China ($N=7$)

	Range	School A I	School A II	School A III	School A IV	School B	School C	School D
Perceived degree of student involvement	1–4	3	4	4	4	3	3	4
Perceived degree of students' liking of the curriculum	1–4	4	4	4	4	3	4	3
Perceived degree of helpfulness of the curriculum	1–5	4	5	4	4	4	4	4
Perceived degree of workers' liking of the curriculum	1–4	3	4	4	4	3	3	3
Perceived degree of workers' overall satisfaction of the curriculum	1–6	5	5	5	5	5	5	5

Notes: Higher value means higher perceived degree of the measured constructs

the curriculum. Third, concerning the perceived benefits of the program to the students, all respondents perceived that the program was helpful to the students. Fourth, all respondents commented that they liked the curriculum. The last question concerned the program implementers' overall satisfaction with the curriculum. As can be seen in Table 5, all program implementers were satisfied with the curriculum.

Discussion

As there is a paucity of validated positive youth development programs in different Chinese contexts, the evaluation findings reported in this chapter can be regarded as a pioneer in nature. As far as the development of evidence-based positive youth development programs is concerned, this is an important step. Systematic collection of evaluation findings on the Project P.A.T.H.S. outside Hong Kong is important for two reasons. First, as the sociocultural features of mainland China are different from those in Hong Kong, what works in Hong Kong may not work in mainland China. Second, as adaptation of the program has been made, it is important to systematically evaluate the adapted version in the mainland Chinese context.

The evaluation findings presented in this chapter are generally positive, and they are in line with the original expectations: subjective outcome evaluation based on the students showed that the students had positive views of the program; subjective outcome evaluation based on the teachers showed that the implementers had positive views of the program; process evaluation showed that the program implementation quality was good; interim evaluation showed that the program implementers evaluated

the program positively in the implementation process. These findings suggest that the program is well received by different stakeholders and the quality of program implementation in China is high.

These findings are consistent with those evaluation findings reported in Hong Kong (Law & Shek, 2012; Shek & Ma, 2012b; Shek & Sun, 2012b; Shek & Yu, 2012a). They suggest that the adapted program works well in mainland China, despite the differences in sociocultural contexts involved. In conjunction with the objective outcome evaluation findings (Shek et al., in press), the present findings strongly suggest that the program is able to promote the holistic development of Secondary 1 students in China. As this is only the first year of implementation, the effects can be regarded as an overachievement. Of course, if resource permits, it would be desirable to conduct a randomized group trial to examine the effectiveness of the program over time.

It is noteworthy that there are several limitations of the findings reported in this chapter. First, for subjective outcome evaluation of the students, demand characteristics might contribute to the results. However, as the students were not required to put down their names, this possibility is not high. Second, for subjective outcome evaluation of the teachers, the positive findings can be regarded as self-fulfilling prophecy. However, this is not plausible because evaluation findings from different sources are consistent. Third, as only one rater was involved in process evaluation, it would be helpful if more raters could be involved and inter-rater reliabilities would be computed. Fourth, for the interim evaluation, only a few items were used to assess the implementation quality. It would be helpful if the psychometric properties of the measure could be assessed. Despite these limitations, the findings are highly consistent with the objective outcome evaluation findings (Shek et al., in press), and the evaluation findings reported in this chapter provide further support for the positive effects of the Tier 1 Program of the Project P.A.T.H.S. in mainland China.

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Evidence-Based Positive Youth Development Programs: Insights from the Project P.A.T.H.S.

Daniel T.L. Shek

Introduction

In the past two decades, there is a growing emphasis on the importance of evidence-based practice (EBP) in different human services, including medicine, nursing, psychology, and social work. According to Sackett, Straus, Richardson, Rosenberg, and Haynes (2000), evidence-based practice is "the integration of best research evidence with clinical experience and client values" (p. 1). Gray (2001) similarly pointed out that evidence-based practice is the "use of best current knowledge as a basis for decisions about groups of patients or populations" (p. 20).

Gambrill (1999) maintained that there are two forms of practice in human services. The first way is authority-based practice where practice is based on authorities such as experts and authorities in the field and the related knowledge is not questioned. Authority-based practice is "pseudoscience" which discourages critical scrutiny of knowledge claims, utilizes rituals of science without substance, relies on anecdotal experience, lacks skepticism, treats open mind as uncritical mind, ignores negative evidence, and upholds beliefs which are not verifiable. On the other hand, evidence-based practice is based on a scientific mode of inquiry which encourages critical scrutiny of knowledge claims, uses scientific procedures with substance,

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relies on scientific findings, encourages skepticism, maintains an open mind, emphasizes negative evidence, and upholds beliefs which are verifiable. Gambrill (1999) clearly stated that "different ways of knowing differ in the extent to which they highlight uncertainty and are designed to weed out biases and distortions that may influence assumptions" (p. 343).

Evidence-based practice can be regarded as a clinical problem-solving process involving five steps. In Step 1, the practitioner formulates issues related to intervention in terms of answerable questions. Brown (1999) pointed out that elements of a clinical question may include intervention treatment protocol, clinical outcomes, preventive or diagnostic decisions, patients' experience, and associated factors. Sackett, Richardson, Rosenberg, and Haynes (1997) stated that there are four elements of well-built clinical questions, including patient or clinical problem, clinical intervention under focus, comparison intervention, and clinical outcome. In this step, credible diagnostic tests and assessment results usually inform the formulation of clinical questions.

In Step 2, the practitioner searches the literature to locate the best available evidence on the problem under focus. In fact, this is the "soul" of EBP because it is maintained that the practitioner should use the "best available" evidence in helping the clients. In Step 3, the practitioner critically appraises the evidence in terms of its validity, reliability, and clinical applicability. In Step 4, the best evidence that has been critically scrutinized would be implemented. In Step 5, clinical performance would be evaluated. In this step, the practitioner would conduct self-evaluation with respect to the formulation of "answerable" questions, identification of the best external evidence, critical appraisal of available evidence, integration of critical appraisal with one's clinical expertise, and potential applications in one's clinical practice (Sackett et al., 1997). According to Shlonsky and Stern (2007), EBP integrates the best evidence, client clinical conditions, and client preferences, which is consistent with the values of social work profession where practitioners share the best available evidence to serve clients better (Thyer & Pignotti, 2011). In contrast to authority-based practice, the evidence-based approach was designed to promote effective use of professional judgment in conjunction with the unique characteristics of the clients, clinical circumstances, preferences, and research findings (Gambrill, 2007). Gambrill (2011) further argued that social workers should not deceive clients by misrepresenting the effectiveness, costs, and benefits of related intervention.

Plath (2006) pointed out that social work (including youth work) can benefit from EBP in five ways. First, effective treatments and positive intervention outcomes can promote professional legitimacy. Second, practice effectiveness in terms of both outcomes and costs can be improved through utilization of positive outcome findings. Third, evidence-based practice promotes the ethical responsibility of social workers. Fourth, evidence-based practice promotes a climate of critical analysis, reflection, and inquiry within the profession. Finally, EBP cultivates a positive research culture where practitioners and researchers are encouraged to work together to produce useful practice research. Gambrill (2006) pointed out that several values are intrinsic to EBP, including courage, curiosity, intellectual empathy, humility,

integrity, and persistence. Through evidence-based practice, several consequences including transparency, harm avoidance, informed consent, autonomy maximization, self-determination, and empowerment are generated.

Hierarchy of Evidence

Historically, the notion of "evidence hierarchy" is central to the process of critical appraisal of the available evidence. There are different conceptions of the evidence hierarchy, commonly from weak to strong evidence, such as from test tube research (weakest form of evidence), animal research, ideas, editorial and opinions, case reports, case series, case-control studies, cohort studies, quasi-experimental studies, randomized controlled trials to systematic reviews and meta-analyses (strongest form of evidence). In terms of outcome evidence, practitioners sometimes differentiate different levels of intervention effectiveness from least effective to most effective, such as from intervention which is not effective or harmful, intervention unlikely to be beneficial, intervention with unknown effectiveness, intervention with both benefits and adverse effects, intervention likely to be beneficial to intervention which is proved to be effective by clear evidence from controlled trials.

Ho, Peterson, and Masoudi (2008) pointed out that different research methods generate different types of evidence. These include case series studies, cross-sectional studies, case-control studies, retrospective cohort studies, prospective cohort studies, and randomized clinical trial studies. For randomized controlled trials, they are usually considered the "gold standard" to determine whether the treatment is "efficacious." The usual design is that subjects are randomly assigned to the experimental condition or control condition. Through randomization, intrinsic group differences are assumed to be evened out. Although RCTs are robust means, there are limitations, including expensive cost, long duration, narrow scope, and inability of the intervention to generalize to the real-life population. In case randomized controlled trails cannot be carried out, quasi-experimental designs would be used. These include (a) pretest/posttest study without a control group, (b) interrupted time series designs, and (c) the pretest/posttest study with a contemporaneous control.

The US Preventive Services Task Force (1989) differentiated the following levels of evidence for treatment:

- Level I evidence: evidence generated from at least one properly designed randomized controlled trial
- Level II-1 evidence: evidence generated from well-designed controlled trials without randomization (i.e., quasi-experimental studies)
- Level II-2 evidence: evidence generated from rigorous cohort or case-control studies, preferably from more than one site or research team
- Level II-3 evidence: the use of multiple time series with or without the intervention
- Level III evidence: evidence based on opinions of authorities, clinical experiences, descriptive studies, or research reports

Based on the benefits or risks and level of evidence, several categories of interventions are proposed by the US Preventive Services Task Force (1989) as follows:

- Level A: The clinical intervention is supported by good scientific evidence with benefits outweighing the potential risks.
- Level B: The clinical intervention is supported by at least fair scientific evidence with benefits outweighing the potential risks.
- Level C: The clinical intervention is supported by at least fair scientific evidence. However, although there are benefits provided by the intervention, the balance between benefits and risks is not great enough to make general recommendations.
- Level D: There is fair scientific evidence suggesting that the potential benefits are less than the potential risks.
- Level E: The available evidence is lacking, poor in quality, or conflicting so that the balance between benefits and risks cannot be properly assessed.

A similar system with different categories was adopted by the Oxford Centre for Evidence-based Medicine (2009) where different types of research are required to generate different types of evidence:

- Level 1A evidence: findings supported by systematic review of randomized controlled trials
- Level 1B evidence: findings based on individual RCT with narrow confidence interval
- Level 2A evidence: findings based on systematic review of cohort studies
- Level 2B evidence: findings based on individual cohort studies
- Level 2C evidence: findings based on "outcomes" research or ecological studies
- Level 3A evidence: findings based on systematic review of case-control studies
- Level 3B evidence: findings based on individual case-control studies
- Level 4 evidence: findings based on case series
- Level 5 evidence: expert opinions without explicit critical appraisal

Evidence-Based Practice and the Project P.A.T.H.S.

The Project P.A.T.H.S. is intimately related to evidence-based practice in several ways. First, in terms of the conceptualization of the project, it is based on the best available evidence. According to Catalano, Berglund, Ryan, Lonczak, and Hawkins (2002), a review of 77 popular positive youth development programs in the United States showed that there were only 25 effective programs. An examination of these successful programs showed that 15 positive youth development constructs were intrinsic to them. These included bonding, resilience, cognitive competence, emotional competence, social competence, behavioral competence, moral competence, self-determination, self-efficacy, spirituality, beliefs in the future, clear and positive identity,

prosocial norms, prosocial involvement, and recognition for positive behavior. The curriculum of the Project P.A.T.H.S. was developed with reference to these positive youth development constructs.

Second, as far as the development of the curriculum is concerned, the process was governed by the following principles (Shek & Ma, 2006). Consistent with the spirit of evidence-based practice, documentation of the constructs and programs has been attempted (Shek, Ma, & Sun, 2011):

- *Principle 1*: A universal program that covers a wide range of positive youth development constructs that are intrinsic to the existing effective programs is developed.
- *Principle 2*: Appropriate theoretical models supported by research and research findings in both Western and Chinese contexts are used to guide curriculum development.
- *Principle 3*: Holistic adolescent development in different domains (physical, psychological, social, and spiritual domains) is focused upon. Essentially, a balanced focus of the program would be maintained.
- *Principle 4*: Adolescent developmental assets and developmental problems (e.g., substance abuse, Internet addiction, and materialism) are covered in curriculum development.
- *Principle 5*: Developmental progression of adolescents is taken into account when designing the curriculum.
- *Principle 6*: Cultural sensitivity is maintained in the development of the program.
- *Principle 7*: Multi-year intervention programs rather than one-shot programs are preferred and developed.
- *Principle 8*: Systematic training program and adequate training are planned for the potential program implementers.
- *Principle 9*: Effective teaching strategies and methods (e.g., interactive and reflective teaching methods and learning processes) are used to maximize the learning effects.
- *Principle 10*: Active participation and involvement of the students are emphasized in the implementation process.
- *Principle 11*: If possible, besides classroom activities, programs outside the classroom are developed.
- *Principle 12*: Generalization of the competence developed to the real-life world is emphasized.
- *Principle 13*: Different stakeholders, including teachers and students, are involved in the design of the program activities.
- *Principle 14*: Relevant issues (e.g., gender differences, school differences, and class differences) are considered in the program design.
- *Principle 15*: Relevant links between the curriculum and socialization agents such as families and schools are established.
- *Principle 16*: Ongoing evaluation is built into different stages of program development and implementation.

As far as training is concerned, several principles governing training of the potential program implementers are maintained in the study (Shek, 2010): design of training programs based on effective training theories/models, transmission of knowledge on adolescent development and the program through training, cultivation of appropriate implementation and reflection skills in the training program, encouragement of workers to be role models, promotion of motivation and self-efficacy of the trainees, provision of opportunities for demonstration and practice and adequate training time, consideration of cultural context in the design of training program, and evaluation of training program.

Finally, based on literature review, an evaluation design based on multiple evaluation strategies with the following evaluation design principles (Shek & Siu, 2006), which are maintained as far as the evaluation of the project is concerned:

- *Principle 1*: Objective outcome indicators at different time points are used to assess changes in the program participants.
- *Principle 2:* Multiple objective outcome indicators including positive youth development and risk behavior measures are used.
- *Principle 3:* Subjective outcome evaluation via client satisfaction survey is important data to be considered in the evaluation.
- *Principle 4:* The views of different stakeholders, including those of the program developers, program implementers, administrators, and program participants, are taken into account.
- *Principle 5:* Program implementers' views (i.e., views of social workers and teachers) of the program are considered.
- *Principle 6:* To provide a holistic picture about evaluation contexts, process, and outcomes, qualitative data are collected.
- *Principle 7:* Both quantitative and qualitative evaluation methods are adopted to give a more complete picture on the program effects.
- *Principle 8:* Understanding the process of implementation is important to understand the program effects.
- *Principle 9:* Triangulation of data collected from different sources by different methods is upheld to give a more in-depth picture of the program effects.
- *Principle 10:* Validated measures are used to assess changes in the program participants.
- *Principle 11:* Existing guidelines in quantitative and qualitative evaluation are strictly observed.
- *Principle 12:* Continuous and ongoing evaluation should be attempted.

An integration of research findings collected from different sources showed that there is support for the effectiveness of the Project P.A.T.H.S. (Catalano et al., 2012; Shek & Sun, 2012). The details of the evaluation finding supporting the effectiveness of the Project P.A.T.H.S. can be found on the website of the project (http://www.paths.hk).

Another important initiative in the Project P.A.T.H.S. is the development of the Chinese Positive Youth Development Scale (CPYDS) which assesses positive youth development in Chinese adolescents. Based on the conceptual framework involving

15 positive youth development constructs (i.e., bonding, resilience, social competence, emotional competence, cognitive competence, moral competence, behavioral competence, self-determination, self-efficacy, spirituality, beliefs in the future, clear and positive identity, prosocial involvement, prosocial norms, and recognition for positive behavior), the CPYDS was designed. In the original validation study, well-adjusted adolescents and poorly adjusted adolescents responded to the CPYDS. The CPYDS and its subscales were found to possess acceptable internal consistency, and the related indicators were able to discriminate between the two groups (i.e., concurrent validity). The total and subscale scores of the CPYDS were positively related to thriving, life satisfaction, and perceived academic achievement; they were negatively related to substance abuse, delinquency, and behavioral intention to engage in problem behavior, thus providing support for the construct validity of the related measures (Shek, Siu, & Lee, 2007).

In a subsequent study (Shek & Ma, 2010), multi-group confirmatory analyses were conducted to examine the dimensionality and factorial invariance of the CPYDS based on the responses of 5,649 Chinese adolescents. The study provided support for the existence of the 15 basic dimensions of the CPYDS, which were found to be subsumed under four higher-order factors (i.e., cognitive-behavioral competencies, prosocial attributes, positive identity, and general positive youth development qualities). Evidence of factorial invariance in terms of configuration, first-order factor loadings, second-order factor loadings, intercepts of measured variable, and intercepts of first-order latent factor was found. This scale provides an example of how we can develop positive youth development measures.

Evidence-Based Positive Youth Development Programs in Chinese Contexts

In a detailed review of evidence-based practice in the social work field in Hong Kong, Shek, Lam, and Tsoi (2004) concluded that evidence-based practice was almost nonexistent in Hong Kong and several observations were highlighted. First, in the social work literature under review, the term "evidence-based practice" research was almost absent. Second, although literature review was usually carried out in some of the practice research studies, it is not clear whether the existing literature had been critically reviewed, and the proposed intervention was based on the best available evidence. Third, validated assessment tools were rarely used in evidence-based social work practice. Fourth, very few researchers had conducted randomized clinical trials in the social work settings. Fifth, few objective outcome evaluation studies were present, with subjective outcome evaluation representing the major form of practice evaluation. Finally, there were no systematic review studies on social work intervention in Hong Kong.

With reference to these observations, there is an urgent need to build up evidence-based positive youth development programs, with at least four tasks in front of us. The first task is to conceive, develop, implement, and evaluate positive youth

evaluation programs. In a detailed review of preventive and positive youth development programs in different Chinese contexts, Shek and Yu (2011) showed that there are few validated programs in this field. There are several factors contributing to this unfortunate observation. First, youth workers in the welfare and education fields are not conscious about the importance of evidence-based youth development programs. Most of the time, having the program developed and implemented, plus aggressive packaging and marketing, would be regarded by practitioners as providing good service. Second, there is also no strong demand from the public for validated positive youth development programs. Most of the time, clients would be "grateful" to the service providers without questioning the service effectiveness. Third, as development of evidence-based programs demands much time and financial resource, it is a real challenge for researchers and practitioners. Fourth, as training in evidence-based practice is not strong for social workers in Hong Kong (Shek, Lam, & Tsoi, 2004; Shek & Leung, in press), youth workers may have real difficulties in developing and implementing positive youth development programs.

The second task is to develop validated positive youth development scales because they play an important role in assisting practitioners to form relevant clinical questions and conduct rigorous evaluation. Unfortunately, while a wide range of indicators are available in the field, there are two major problems related to the assessment of the construct of positive youth development. First, as pointed out by Roth, Brooks-Gunn, Murray, and Foster (1998), although positive youth development programs commonly focus on adolescent competencies, there are wide variations in the related definitions, hence making it difficult to assess the related concepts. Scales, Benson, Leffert, and Blyth (2000) explicitly argued that "studies of adolescent behavior are dominated by naming, measuring, and predicting problem behaviors… empirically, the territory of positive developmental outcomes, as contrasted with that of risk behaviors, has been less explored" (p. 27). Second, the existing measures are mostly developed in the West, and there are very few non-English validated measures, particularly with reference to the Chinese culture. Although the Chinese Positive Youth Development Scale represents the first step to assess positive youth development in an objective manner, it is necessary to develop validated positive youth development scales in the Chinese contexts, such as assessment of character and care. Obviously, in order to develop positive youth development measures, youth workers should receive training in psychometrics which enables them to critically consume the related literature and apply relevant scales in assessment and evaluation.

The third task is to develop credible databases that can facilitate evidence-based practice. A survey of the literature shows that three types of databases deserve our attention. The first type is databases related to different academic disciplines. For example, in the social work profession such as youth work, the most commonly used database is the *Social Work Abstracts*. According to EBSCOhost, "*Social Work Abstracts* offers extensive coverage of more than 850 social work and human services journals dating back to 1965. Produced by the National Association of Social Workers (NASW), the database provides indexing and abstracts dealing with all aspects of the social work field, including theory and practice, areas of service

and social issues, and problems. Researchers seeking scholarly and professional perspectives on subjects such as therapy, education, human services, addictions, child and family welfare, mental health, civil and legal rights, and more will find *Social Work Abstracts* to be an indispensable resource" (http://www.ebscohost.com/academic/social-work-abstracts). The National Association for Social Workers states that "for more than 30 years, NASW's abstracting service has been the starting point for literature searches in social work and social welfare. *Social Work Abstracts* reviews over 500 U.S. and international journals and publishes approximately 500 abstracts each quarter" (http://www.naswpress.org/publications/journals/swab.html). Nevertheless, practitioners should be cautious when using the *Social Work Abstracts*. For example, based on a review of the comprehensiveness of *Social Work Abstracts* in comparison with *PsycINFO, CSA Sociological Abstracts,* and *Medline*, Shek (2008) showed that comprehensiveness of journal papers indexed in the *Social Work Abstracts* was not high when compared with other databases with reference to social work-related publications.

Besides social work, there are other professional databases from other disciplines that are relevant to evidence-based positive youth development programs. As positive youth development is closely related to psychology, *PsycINFO* deserves the attention of social workers. According to the American Psychological Association, *PsycINFO* has more than 3.3 million records including peer-reviewed journals, books, and dissertations which cover psychology and other disciplines such as medicine, law, social work, neuroscience, business, nursing, forensics, and engineering (http://www.apa.org/pubs/databases/psycinfo/index.aspx).

The second set of databases is devoted to systematic reviews and meta-analyses. In the medical and health fields, Cochrane Collaboration is an international network which operates the Cochrane Library which includes the Cochrane Database of Systematic Reviews. In social sciences, the Campbell Collaboration similarly maintains a systematic review database on psychosocial intervention in education, crime and justice, and social welfare. It involves an international research network that produces systematic review of the effects of social interventions. There are different coordinating groups (e.g., Social Welfare, Crime and Justice, Education, Methods, and the Users group), each responsible for the production, scientific merit, and relevance of Campbell Collaboration's systematic reviews.

The final set of databases is developed by government organizations or government-related organizations. For example, for the National Registry of Effective Programs and Practices (NREPP) of the Substance Abuse and Mental Health Services Administration (SAMHSA), more than 250 interventions on substance abuse and mental health treatment together with effective and promising programs were included. For the Center for Substance Abuse Prevention, model, effective, and promising programs were also included (e.g., Schinke, Brounstein, & Gardner, 2002). As there is currently no similar database in different Chinese contexts, there is a need to develop such databases.

The final task in developing evidence-based positive youth development programs is to develop "critical appraisal" skills of practitioners. In another recent review of evidence-based social work in Hong Kong, Shek and Leung (in press)

examined the course outlines or subject descriptions of social work research. Several observations were highlighted from the review. First, evidence-based practice was not emphasized in social work education in Hong Kong. Even when evidence-based practice was mentioned, the coverage of evidence-based practice was minimal. Similarly, there was very little coverage of program evaluation. Second, experimental designs were not emphasized in social work research. Even if experimental designs were covered, they were not closely linked to evidence-based practice. There were also few courses which covered randomized clinical trials and longitudinal evaluation studies. Third, statistical analyses are weakly covered in the social work research courses in Hong Kong. More advanced statistical analytical techniques such as linear mixed methods and individual growth curves modeling were not covered in social work research. Fourth, scale validation was not extensively taught in social work research courses. Fifth, while there is a growing body of research on qualitative evaluation, it was seldom linked to evidence-based practice. With the weak link between qualitative research methods and evidence-based practice in social work training, whether social workers can conduct rigorous qualitative research in program evaluation is questionable. Furthermore, the roles of qualitative research in evidence-based practice need further exploration.

It is also noteworthy that barriers to evidence-based practice exist in Hong Kong (Shek & Leung, in press). First, the general public is not conscious of the importance of service effectiveness, and the demand for services based on the best available research evidence does not exist. Second, there is a lack of incentives through promotion or salary raise in connection with evidence-based practice. Third, the most important barrier is the lack of a critical culture within the social work profession. As a start, the training for social workers regarding research rigor is not strong. Besides, as the workload of social workers is typically very heavy, attention is usually placed on fulfillment of tasks and output requirements.

The final category of obstacles is the lack of systematic education on evidence-based practice. As mentioned, the notion of evidence-based practice does not appear explicitly in the formal curricula of social work training programs. As such, social work graduates are quite weak in terms of critically consuming evidence-based research, not to mention developing evidence-based social work practice approaches. In addition, because there is no requirement for continuous education in the existing registration system, practicing social workers may not be conscious of the latest development in psychosocial intervention. In fact, social work practitioners are not sensitive enough to the latest development in evidence-based macro and micro practice.

Conclusions

There is a need to develop more evidence-based positive youth development programs in different Chinese communities. This need is great and important because Chinese youths constitute roughly one-fifth of the youth population in the world.

Related programs have theoretical and practical significance, particularly with reference to the issue of universality of youth development across cultures. The Project P.A.T.H.S. is a good example showing how an evidence-based perspective is included in the development of an evidence-based positive youth development program in a Chinese context, particularly with respect to the utilization of the best available research evidence and systematic evaluation of the developed program. Looking ahead, more effort should be put into development of validated positive youth development programs, psychosocial measures, and databases reviewing and documenting Chinese positive youth development programs and strengthening of education on evidence-based practice.

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