

Parental influences and adolescent career behaviours in a collectivist cultural setting

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Abstract Using social cognitive career theory, we examined the relationships between parental variables (parental career expectations, adolescent–parent career congruence) and adolescent career aspirations and career actions (planning, exploration) in a sample of Grade 10 Indonesian high school students. We found good support for a model that revealed various routes by which the two parental variables were associated with adolescent career aspirations and career actions, although the main influence of the parental variables was by way of self-efficacy. The findings demonstrate important roles for parental career expectations and adolescent–parent career congruence in adolescents’ career aspirations and actions.

Résumé. **Les influences parentales et les comportements professionnels des adolescents dans un cadre culturel collectiviste.** En utilisant la théorie sociale cognitive de l’orientation, nous avons examiné les relations entre les variables parentales (attentes professionnelles des parents, la congruence professionnelle adolescent-parent), les aspirations professionnelles des adolescents et les actions professionnelles (planification, exploration) auprès d’un échantillon d’élèves de 10^e année d’école secondaire en Indonésie. Nous avons trouvé de bons appuis pour un modèle qui a révélé différentes voies par lesquelles les deux variables parentales étaient associées avec les aspirations professionnelles des adolescents et les actions professionnelles, bien que l’influence principale des variables parentales soit celle du sentiment d’auto-efficacité. Les résultats démontrent un rôle important des

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attentes professionnelles des parents et de la congruence professionnelle adolescent-parent sur les aspirations et les actions professionnelles des adolescents.

Zusammenfassung. Elterliche Einflüsse und Laufbahnverhalten von Jugendlichen in einem kollektivistischen kulturellen Umfeld. Auf der Grundlage der sozial-kognitiven Laufbahntheorie untersuchten wir die Beziehungen zwischen Eltern-Variablen (elterliche Berufserwartungen, Jugendliche-Eltern Berufskongruenz) und Berufswünsche und Laufbahnverhalten (Planung, Exploration) von Jugendlichen in einer Stichprobe von indonesischen Gymnasiasten in der 10. Klasse. Wir fanden gute Unterstützung für ein Modell, das verschiedene Wege zeigte, wie die beiden elterlichen Variablen mit den Berufswünschen und Laufbahnverhalten der Jugendlichen verbunden waren, obwohl der größte Einfluss der elterlichen Variablen durch die Selbstwirksamkeit erfolgte. Die Ergebnisse zeigen wichtige Rollen der elterlichen Karriereerwartungen und Jugendliche-Eltern Berufskongruenz in Bezug auf Berufswünsche und Laufbahnverhalten von Jugendlichen.

Resumen. Las influencias parentales y comportamientos adolescentes de carrera en un entorno cultural colectivista. Usando la teoría social cognitiva carrera, se examinaron las relaciones entre las variables de los padres (parental expectativas de carrera, congruencia carrera adolescentes y padres) y las aspiraciones de carrera adolescentes y acciones profesionales (planificación, exploración) en una muestra de 10 ° grado en estudiantes de secundaria de Indonesia. Hemos encontrado un buen soporte para un modelo que diversas rutas reveladas por el cual las dos variables parentales eran asociado con aspiraciones profesionales adolescentes y acciones de carrera, aunque la principal influencia de las variables parentales era por medio de autoeficacia. Los resultados demuestran un papel importante para los padres expectativas de carrera y congruencia carrera adolescentes y los padres en aspiraciones y acciones de carrera adolescentes.

Keywords Parental career expectations · Adolescent–parent career congruence · Career aspirations · Career actions

There is considerable research demonstrating that the family is an important influence on the career development of their adolescent children. Parents, especially, play a central role in cultivating their children's career aspirations and fostering exploration around their educational and career pathways (Young et al., 2006). This role for parents is evident cross-culturally, with parents from both collectivist and non-collectivist countries having a significant effect on the career development of their children (Dietrich & Kracke, 2009; Garcia, Restubog, Toledano, Tolentino, & Rafferti, 2012). However, with few exceptions (e.g., Leung, Hou, Gati, & Li, 2011), there has been little research conducted in collectivist countries, where in-group reliance and inter-dependence are the norm (Kitayama & Uchida, 2005). Although career researchers have begun to highlight parental expectations and congruence between adolescents and their parents as important considerations in the career development of adolescents from collectivist societies

(e.g., Leung et al., 2011; Ma & Yeh, 2005; Wang & Heppner, 2002), no studies have examined the outcomes of these important variables from a theoretical perspective. The goal of the current study was to test the effects of two aspects of the proximal parental contextual influence, that of adolescents' perceived parental career expectations and congruence with parents regarding career matters, using the social cognitive career theory framework (SCCT; Lent, Brown, & Hackett, 1994). Our outcome variables of interest were adolescents' career aspirations and the career actions of planning and exploration.

Family and parental influences on career development

Both general family processes and career-specific parental behaviours can have an influence on adolescent career development. First, family process variables, such as parental expectations and encouragement, have been shown to have an effect on children's career development over and above that of family structural variables, such as socio-economic level and the number of children in the family (Whiston & Keller, 2004). Specific examples of process variables include the family's emotional climate, which has been shown to be related to career planning, vocational identity, and career decision-making self-efficacy (Hargrove, Creagh, & Burgess, 2002; Hargrove, Inman, & Crane, 2005). Family support also has been found to be associated with career search self-efficacy and decision-making (Nota, Ferrari, Solberg, & Soresi, 2007). Second, career-specific parental behaviours were found to be related to adolescents' career development (Dietrich & Kracke, 2009). For example, parental career support has been recognised as an important factor in enhancing career confidence and planning (Perry, Liu, & Pabian, 2010). Parental feedback on career aspirations also has been shown to be associated with a range of potential actions considered to achieve those goals (Young et al., 2006).

Parental influences and adolescent career development in collectivist cultures

Family influences are especially underlined in collectivist countries (Oettingen & Zosuls, 2006). In these cultural contexts, the private and collective selves are not inherently separate (Leong, Hardin, & Gupta, 2011). Cognitive schemas are constructed in reference to the expectations, opinions, and evaluations of significant others, particularly parents, as well as to the individual's own desires and needs (Kitayama & Uchida, 2005). Additionally, in cultures where there is a large power distance (i.e., the extent to which the less powerful members of institutions, in this case the family, expect and accept the exertion of power from the more powerful members; Hofstede & Hofstede, 2005), evaluations made by in-group members (parents being first and foremost for children) are heavily weighted and often given priority when actions are contemplated. In this context, parents are looked up to as important role models and facilitators, as they have a strong influence on their children. They command respect, and have considerable influence on their children's sense of self-efficacy and on the decisions made by their children (Oettingen & Zosuls, 2006).

Although every individual has both collectivist and individualist propensities in their cognitive systems, the proportions are different. Individuals who have grown up in collectivist cultures have a stronger tendency to act in a collectivistic manner and a weaker tendency to perform individualistic behaviours, whereas those raised in individualist contexts tend to have the opposite set of tendencies. When facing a situation, the former individuals have a tendency to respond from a collectivist perspective, whereas the latter will respond using an individualist orientation. Consequently, social behaviour is not the same across cultures (Triandis, 1995).

For example, when a person growing up in collectivist contexts makes a career decision that has the goal of making significant others (e.g., parents) satisfied, it is likely that the decision will please the individual as well (Leong et al., 2011). Thus, disregarding the wishes of one's parents when implementing career actions is a contradiction of the individual's sense of self (Hardin, Leong, & Osipow, 2001). This can be contrasted with what occurs in individualist societies, where intense motivation to gratify one's parents when making important decisions might imply a dysfunctional dependence on parental endorsement (Schneider, 1998). Adolescents from these societies might be aware of the expectations of significant others, but they would not think it "quite right" to give primacy to influences outside of themselves when deciding what to do, as the individual self-reference is more influential in regulating actions (Kitayama & Uchida, 2005).

Parental career expectations and adolescent–parent career congruence

Several qualitative studies have examined the relationship between parental career expectations and specific career behaviours in children from collectivist cultures (e.g., Fouad et al., 2008; Shea, Ma, & Yeh, 2007). These studies suggest that parental career expectations, values, and support, together with perceived obligations to the family, are dominant themes in the adolescent career development process, especially around developing career aspirations, interests, and values. Further, children from collectivist cultural backgrounds also perceive their parents' academic and career-related expectations to be specific. Children usually have a clear understanding as to the level of education they need to reach, the career they should select, and the level of occupational success they should achieve (Fouad et al., 2008). Compared to their individualist counterparts, adolescents from these cultures perceive more direct parental influence on their career aspirations and options, and thus, have to adjust their own career interests to meet their parents' approval (Leong & Serafica, 1995). At the same time, the adolescents themselves perceive parental influence and control as legitimate, and do not have expectations that their education and career-related decisions will be theirs alone to make (Bernardo, 2010; Hardin et al., 2001).

Whilst parental expectations are often reported as significant contributors to positive career-related outcomes (e.g., Fouad et al., 2008), how well children meet these expectations is an important consideration. Adolescents who felt that they could meet parental expectations in the career and academic areas demonstrated a greater capacity to cope with career-related problems (Leung et al., 2011), whereas

those who felt that they could not live up to parental expectations were more at risk of experiencing psychological distress (Wang & Heppner, 2002). These studies demonstrated that to be congruent with parental expectations is beneficial as it affects both career development and well-being.

Further, adolescents from collectivist cultures also anticipate reciprocities within the relationships with significant others (i.e., their parents; Kitayama & Uchida, 2005). Thus, on the one hand, it is important for adolescents who have grown up in collectivist cultures to perceive that they are capable of adjusting their career goals and actions to what is acceptable to their parents. On the other hand, it is important to perceive that their parents' actions and/or reactions fit with their own expectations and needs. For example, while recent studies have demonstrated the importance of parental support in fostering adolescents' career aspirations, planning (Ma & Yeh, 2010), and exploration (Cheung & Arnold, 2010), other research has shown that the effect of parental support on adolescents' career development is conditional on the adolescents perceiving their parents' actions as supportive (Garcia et al., 2012). This suggests that the anticipated consequence of parental actions will be met only if the intended inputs are similarly construed by the parents and their children. Thus, being congruent with parents concerning career matters captures adolescent perceptions that parents have corresponding career values, interests, aspirations, and plans (supplementary congruence). It also captures adolescent perceptions that parents are facilitative in their career progress at the level required and are happy or satisfied with their career-related actions and progress (complementary congruence).

In sum, parental career expectations and congruence with parents regarding career matters (i.e., perceiving to be in line with parental wishes, being supported by parents, and being able to make parents satisfied) have the potential for explaining adolescents' career development in a collectivist society. Our study was designed to test the associations between these parental variables and adolescents' career aspirations and the career actions of planning and exploration.

Career aspirations and the career actions of planning and exploration

Career aspirations are important to study as they are forerunners to future career choices and attainment (Schoon & Polek, 2011). Career aspirations are "an individual's expressed career-related goals or choices" (Rojewski, 2005, p. 132), and in this study, were operationalised as the individual's career goals that capture the domains of leadership roles, ambition to manage and to train others, and interest in advance education (O'Brien, 1996).

Career planning and exploration are crucial to examine as they are essential actions required to realise one's career aspirations (Rogers, Creed, & Glendon, 2008). Career planning involves activities associated with managing existing information about future course of action, and includes setting short-term goals, timelines, and strategies that will facilitate career progress. Career planning is an ongoing activity, although it becomes especially salient during times of crisis or when there is a career transition (Zikic & Klehe, 2006). Whilst career planning

involves thinking about and preparing for an occupational future, career exploration captures the gathering of information relevant to career progress (Blustein, 1997; Stumpf, Colarelli, & Hartman, 1983). As a lifelong process, career exploration allows individuals to manage better any challenges associated with a transition (Blustein, 1997; Savickas, 1997). Self-exploration involves the exploration of the individual's own interests, values, and experiences in order to obtain a more comprehensive understanding of themselves. Environmental exploration focuses on the individual's investigation of various career choices and involves gathering relevant information that allows more well-informed career decisions (Zikic & Klehe, 2006).

The social-cognitive career theory perspective

SCCT (Lent et al., 1994) proposes that self-efficacy (beliefs about one's ability to effectively organise and perform courses of action), outcome expectations (contingency beliefs that one's efforts will result in desired consequences), and goals (or aspirations), are three key variables for career agency. These variables operate together with person, contextual, and learning variables (e.g., gender, parental involvement, and skill development opportunities) to motivate career actions, such as career planning and exploration.

Further, each individual is affected by influences from the environment that are perceived to be significant in the pursuit of goals (Lent, Brown, & Hackett, 2000). SCCT (Lent et al., 1994) divides these contextual influences into two categories: distal influences (e.g., gender-role stereotypes) that provide individuals with learning opportunities and resources that foster self-efficacy, outcome expectations, and interests; and proximal influences (e.g., career barriers) that affect individuals during the active stages of career decision-making (Lent et al., 2000).

While SCCT (Lent et al., 1994) proposes that proximal contextual variables directly influence the individual's career goals and career actions, Bandura's (1999, 2000) general social cognitive theory holds that these variables affect career goals directly and indirectly by way of self-efficacy, and influence career actions only indirectly by way of self-efficacy and goals. Several studies in individualist contexts (i.e., Western countries) have compared these two approaches (e.g., Lent et al., 2001, 2003) and also have integrated them (e.g., Lent et al., 2005). Most of these studies demonstrated support for the indirect relationships between proximal contextual influences and goals (e.g., Lent et al., 2001, 2005) and actions (e.g., Lent et al., 2003). Consistent with Lent et al.'s (2000) approach that the career choices of individuals in collectivist cultures may be directly influenced by significant others, one study with participants from a collectivist cultural background showed that parental involvement had a strong direct effect on individuals' career choice (Tang, Fouad, & Smith, 1999). To obtain a fuller picture about adolescents' career behaviours in a collectivist society, we test both approaches in the current study.

We employed the SCCT (Lent et al., 1994) as a framework, as it highlights both dynamic individual processes and context-specific influences when providing a schema to explain how individuals are able to develop, change, and regulate their

behaviour (cf. Lent et al., 1994). The theory has been widely used to explain career activities (e.g., Rogers & Creed, 2011; Rogers et al., 2008) and subject selection, such as mathematics, science, and engineering (e.g., Lent et al., 2001, 2003). Of particular value, is the theory's capacity to incorporate contextual influences. As cross-cultural applicability has been demonstrated for the theory (e.g., Garcia et al., 2012; Rogers et al., 2008; Tang et al., 1999), examining the relationships between parental influences and career outcomes in a collectivist cultural context was expected to enrich the utility of the model.

The current study

Research on career development in collectivist cultures is very limited (Lent et al., 2003), and our study adds to the understanding of the parental influences on career progress in this context. We examined the relationships between parental variables and adolescents' career aspirations and actions in a collectivist society. Having SCCT (Lent et al., 1994) as a framework, we used career aspirations to represent career goals, and career planning and exploration to reflect career actions, as these variables were suitable for high school students.

Based on the SCCT basic hypotheses (Lent et al., 1994), we expected that (a) self-efficacy would be associated positively with outcome expectations, career aspirations, planning, and exploration; (b) outcome expectations would be associated positively with career aspirations, planning, and exploration; and (c) career aspirations would be associated positively with career planning and exploration. Further, we considered parental career expectations and adolescent–parent career congruence as proximal contextual variables. When developing the hypotheses regarding the ways by which these variables related to career aspirations and actions, we integrated Bandura's (1999, 2000) and Lent et al.'s (1994) approaches. Therefore, we expected that (d) both parental influences would be associated positively with career aspirations directly and indirectly by way of self-efficacy; and (e) both parental variables would be correlated positively with the career actions of planning and exploration directly and indirectly by way of self-efficacy and career aspirations. See Figure 1.

We tested our hypotheses using a sample of Grade 10 Indonesian high school students. As Indonesia is rated high on the dimensions of collectivism and power distance (Hofstede & Hofstede, 2005), we anticipated that parental career expectations and career congruence with parents would be especially salient variables to consider. These students must choose a major at the end of their Grade 10 year. As this major commits them to particular studies in Grades 11 and 12, the last quarter of grade 10 is a period during which they discuss possible majors, educational paths, and future careers with significant others, especially parents. It is a time for them to cement career goals, explore education and career-related options, plan their futures, and manage relevant resources. As these students have grown up in a collectivist context, and were at the active stage of career decision making, the sample was appropriate for the study.

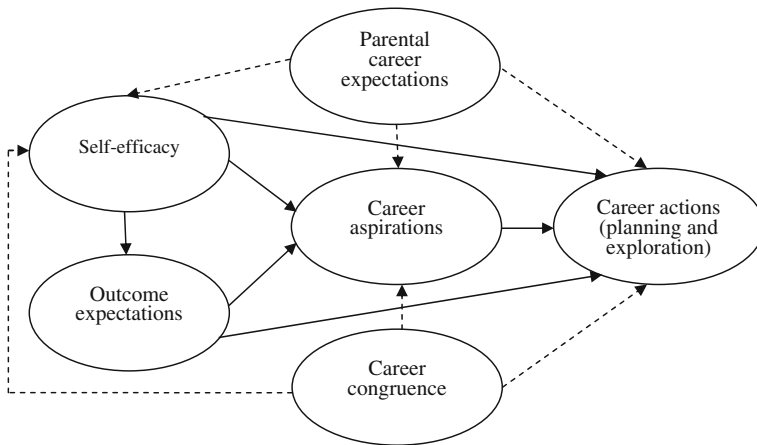


Fig. 1 Basic SCCT model (*full lines*); model depicting hypothesised relationships between parental career expectations and adolescent–parent career congruence and career aspirations and the career actions of planning and exploration (*dashed lines*)

Method

Participants

Participants were 351 Grade 10 students (53.3 % girls, mean age 15.93 years, $SD = .51$), enrolled in a high school in Central Java, Indonesia. When asked to indicate their typical grades in school, five students (2.3 %) reported “low achievement,” 147 (41.9 %) “average,” 196 (55.8 %) “above average,” and three students (.9 %) indicated “well above average” results. Most students (310; 88.3 %) reported that in Year 11 they wanted to select the Natural Sciences major, 38 students (10.8 %) intended to select Social Sciences, and three students (0.9 %) planned to choose the Languages stream. A small number of students (12 %) reported current or previous paid part-time work while at school; this low level is common for Indonesian high school students.

Materials

Parental career expectations

The 9-item Perceived Parental Expectation Subscale (Academic Achievement Domain) from the Living up to Parental Expectations Scale (Wang & Heppner, 2002) assesses students’ perceptions of parental expectations related to their career choice and academic performance. Students responded to items such as, “Parents expect you to study hard to get high-paying job in the future, how strong do you perceive this from your parents?” on a 6-point Likert-type scale (1 = *not at all expected* and 6 = *very strongly expected*). Higher scores indicate higher levels of

perceived parental career expectations. Internal reliability coefficients of more than .80 and moderate level test–retest reliability over a 4-week period have been reported for the subscale (Leung et al., 2011; Wang & Heppner, 2002). Wang and Heppner (2002) reported construct validity based on factor analysis, and showed criterion and predictive validity based on relationship with related variables. Alpha for the current sample was .78.

Adolescent–parent career congruence

The 12-item Adolescent–Parent Career Congruence Scale (Sawitri, Creed, & Zimmer-Gembeck, 2013) contains seven items that tap the complementary congruence domain (i.e., adolescent perceptions that parents are helpful in progressing their career goals, and that parents are happy or satisfied with their career direction and progress), and five items that tap the supplementary congruence domain (i.e., adolescent perceptions that parents possess matching ideas regarding career interests, values, plans, and goals). Students responded to statements such as, “My parents want the same career for me as I want for myself” on a 6-point scale (1 = *strongly disagree* and 6 = *strongly agree*). Higher total scores reflect a higher degree of perceived congruence with parents regarding career matters. Sawitri et al. (2013) reported an internal reliability coefficient of .87, and provided support for construct validity by identifying positive correlations with parental support, living-up-to parental expectations, and life satisfaction. Alpha was .88.

Career self-efficacy

The 12-item Career Decision Making Self-Efficacy Subscale from the Middle School Self-Efficacy Scale (Fouad, Smith, & Enochs, 1997) measures students’ level of career decision-making self-efficacy. On a 6-point scale (1 = *not confident at all* and 6 = *highly confident*), students responded to items such as, “How confident are you that you can find information in the library about occupations you are interested in?” Higher scores indicate stronger self-efficacy beliefs. Internal reliability coefficients of .89 and .79 have been reported (Creed, Tilbury, Buys, & Crawford, 2011; Fouad et al., 1997). Construct validity has been demonstrated by factor analysis and testing correlations with career variables such as planning and exploration (Creed et al., 2011; Fouad et al., 1997). Alpha was .78.

Career outcome expectations

The 6-item Vocational Outcome Expectations Scale (McWhirter, Rasheed, & Crothers, 2000) assesses students’ level of career outcome expectations. Students responded to items such as, “My career planning will lead to a satisfying career for me,” on a 6-point scale (1 = *strongly disagree* and 6 = *strongly agree*). Higher scores indicate stronger career outcome expectations. The authors reported an internal alpha of .83 and a test–retest coefficient of .59 over a 9-week period. Evidence for validity has been demonstrated by positive correlation with Fouad and

Smith's (1996) outcome expectation instrument (McWhirter et al., 2000). Alpha was .79.

Career aspirations

The 10-item Career Aspirations Scale (O'Brien, 1996) measures the domains of leadership aspirations, ambition to train and manage others, and interest in further education. Students responded to items such as, "I hope to become a leader in my career field" on a 6 point scale (1 = *strongly disagree* and 6 = *strongly agree*). Higher total scores are reflective of higher career aspirations. Alphas have been reported as .74 and .84 (O'Brien, 1996; Reynolds & Constantine, 2007). Evidence for validity has been supported by positive correlations with career salience and academic achievement, and by negative correlations with negative affectivity and occupational traditionality (O'Brien, 1996). Alpha was .71.

Career planning

The 8-item Career Thinking and Planning Subscale of the Career Salience Scale (Greenhaus, 1971) assesses the level of career relevant thoughts and planning. Students responded to items such as, "I enjoy thinking about and making plans about my future career" on a 6-point scale (1 = *strongly disagree* and 6 = *strongly agree*). Higher scores indicate more involvement in career planning. Alphas have been reported as .74 and .72 (Creed, Fallon, & Hood, 2009; Zikic & Klehe, 2006). Construct validity has been supported by associations with measures of job searching, career exploration (Zikic & Klehe, 2006), career exploration, and self-regulation (Creed et al., 2009). Alpha was .70.

Career exploration

The Career Exploration Survey (Stumpf et al., 1983) assesses the degree to which students were involved in career exploration activities during the last 3 months. Students responded to items such as, "In the last 3 months, I have been focusing my thoughts on myself as a person in relation to my career" (self-exploration domain; 5 items) and "In the last 3 months, I have been investigating career possibilities" (environmental exploration domain; 6 items) on a 6-point scale (1 = *almost never* and 6 = *very often*). Higher total scores indicate higher engagement in career exploration activities during the last 3 months. Alpha for the scale has been reported as .90 (Hirschi, 2011). Validity evidence has been shown by positive correlation with career planning and negative correlation with career concerns (Creed et al., 2009). Alpha was .81.

Translation procedure

We followed Brislin's (1986) recommendations to translate the measures into Bahasa (the Indonesian language). First, the items were translated into Bahasa by two native Indonesian speakers who also spoke English. Second, the readability of

the translated version was then checked by two monolingual Indonesian speakers. Third, two native Indonesian speakers who also spoke English blindly back-translated the measures into English. Fourth, the back-translated versions were then compared with the original English version to ensure the accuracy of meaning, and any errors were corrected. Last, three Indonesian high school students checked the final Indonesian version and commented on readability.

Data collection procedure

Teachers and the first author administered the survey in class time. Three hundred and eighty-nine students obtained permission from their parents and agreed to participate in the survey. Three students did not return the informed consent forms and were given an equivalent activity by the class teacher. As 38 students were not able to complete the survey satisfactorily, we obtained 351 usable surveys. The study had approval from the authors' university ethics committee. Both parent and student consent were also obtained. The data reported in this study constitute one part of a larger study, which is tracking the career development of children in Indonesia (see Sawitri et al., 2013).

Statistical analysis

Data management for model testing

To achieve a ratio of 10:1 for sample size to parameters estimated in the latent variable analysis (Kline, 2011), we created item parcels to represent all scales (Landis, Beal, & Tesluk, 2000). We used an item-to-construct balance procedure to create three parcels for each latent variable (Hau & Marsh, 2004). Using exploratory factor analysis, we specified a single-factor model for each scale. We then created parcels by using the three items with the highest loadings to anchor the three parcels, adding the next three items to the parcels in a reverse order, and continuing until all items were allocated (Little, Cunningham, Shahar, & Widaman, 2002).

Steps in model testing

We (a) assessed a measurement model to ensure that all latent variables (parental career expectations, adolescent–parent career congruence, self-efficacy, outcome expectations, career aspirations, career planning, and career exploration) were represented adequately by their parcels; and (b) assessed the hypothesised structural model. All analyses were conducted in AMOS using maximum likelihood estimation. Model fit was assessed using χ^2 , Goodness of Fit (GFI), the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). With 351 participants and 21 observed variables, a significant χ^2 , GFI values more than .90, CFI and TLI values more than .92, and RMSEA less than .07 indicate an acceptable fit. As χ^2 is sensitive to sample size, we also examined χ^2/df , with values less than 3 indicating an acceptable fit (Hair, Black, Babin, & Anderson, 2010).

Results

Structural model testing

The fit statistics for the measurement model were good, $\chi^2(168, N = 351) = 286.41, p < .001, \chi^2/df = 1.71, CFI = .96, GFI = .93, TLI = .95, RMSEA = .05$. Factor loadings ranged from .49 to .89. Table 1 reports summary data, zero-order correlations, and correlations among the latent variables.

We did not include age, gender, school achievement, major, or work experience in the structural model, as these variables had weak correlations with career aspirations, planning, and exploration ($r = .01$ to $.12$). The structural model demonstrated good fit statistics, $\chi^2(169, N = 351) = 276.60, p < .001, \chi^2/df = 1.64, CFI = .96, GFI = .93, TLI = .96, RMSEA = .04$. In this model, there were several non-significant, direct pathways: (a) parental expectations to planning; (b) congruence to aspirations, planning, and exploration; (c) self-efficacy to aspirations and planning; (d) outcome expectations to exploration; and (e) aspirations to exploration. The model accounted for 42 % of the variance in self-efficacy, 52.1 % in outcome expectations, 32.5 % in aspirations, 50.5 % in planning, and 31.4 % in exploration. The total standardised effects for parental career expectations were .20 (on self-efficacy), .14 (outcome expectations), .27 (aspirations), .11 (planning), and .23 (exploration). For adolescent–parent career congruence, the effects were .56 (self-efficacy), .40 (outcome expectations), .31 (aspirations), .38 (planning), and .34 (exploration). See Figure 2.

Additionally, we tested the mediation pathways in the final model by following the recommendations of Shrout and Bolger (2002). First, we tested a structural model that contained the direct effects only, and then tested a model that contained both the direct and indirect effects. Finally, we estimated standard errors and 95 % bias-corrected confidence intervals using the AMOS bootstrapping technique. Mediation can be inferred when the predictor and the outcome are significantly correlated, the mediator is correlated with the predictor and the outcome variable, and the 95 % confidence interval of the indirect effect through the mediator does not include zero. Full mediation occurs when the direct effect is reduced to zero when the mediator is included in the model; partial mediation occurs when the direct effect is reduced significantly when the mediator is included.

First, we tested if there was an indirect path from parental career expectations to aspirations (via self-efficacy and outcome expectations). There was a direct effect for parental expectations to aspirations ($\beta = .25, p < .001$), establishing the first criterion for mediation. Using 1,000 bootstrapped samples, we then tested the direct and indirect effects together. Here, parental expectations predicted self-efficacy ($\beta = .20, p < .001$), self-efficacy predicted outcome expectations ($\beta = .72, p < .001$), and outcome expectations predicted aspirations ($\beta = .27, p < .01$), showing all requirements for mediation were met. Parental expectations remained significantly associated with aspirations ($\beta = .20, p < .001$), and as the indirect CI did not contain zero (CIs = .02 to .14), self-efficacy and outcome expectations partially mediated the effect for parental expectations to aspirations. Using the same procedures, we tested the indirect effects for (a) congruence to aspirations (via self-

Table 1 Summary data, zero-order correlations (above diagonal), and correlations among latent variables (below diagonal); $N = 351$

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Parental career expectations	47.01	4.62	–	.22**	.25**	.22**	.25**	.20**	.26**
2. Adolescent–parent congruence	53.15	8.05	.31***	–	.50**	.42**	.31**	.35**	.35**
3. Self-efficacy	54.71	6.03	.37***	.61***	–	.57**	.35**	.38**	.42**
4. Outcome expectations	28.86	3.37	.29***	.50***	.71***	–	.35**	.46**	.33**
5. Career aspirations	46.47	5.36	.39***	.41***	.50***	.50***	–	.46**	.27**
6. Career planning	38.12	4.25	.25***	.44***	.51***	.61***	.64***	–	.43**
7. Career exploration	42.62	7.19	.34***	.41***	.53***	.39***	.35***	.52***	–

** $p < .01$, *** $p < .001$

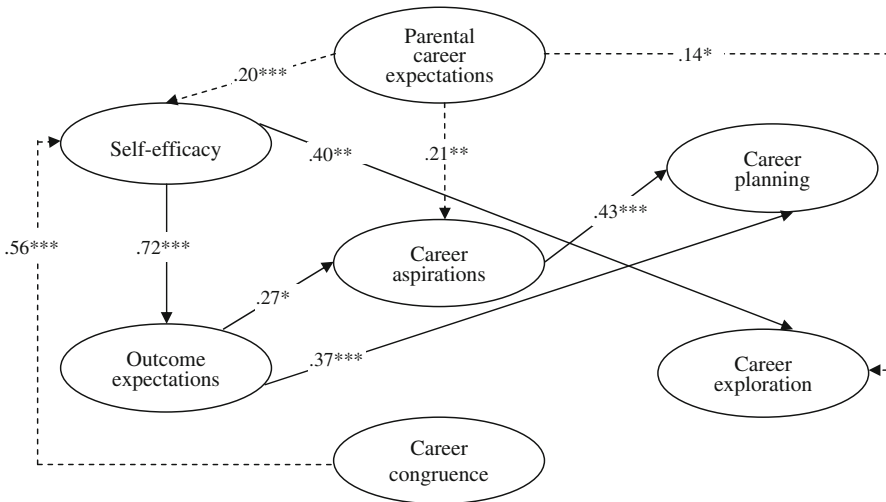


Fig. 2 The final model with standardised regression weights included. Only significant paths included to avoid visual clutter. *Full lines* reflect basic SCCT model, *dashed lines* reflect relationships between parental variables and career aspirations and the career actions of planning and exploration. * $p < .05$, ** $p < .01$, *** $p < .001$

efficacy and outcome expectations); (b) parental expectations to planning (via self-efficacy, outcome expectations, and aspirations); (c) parental expectations to planning (via self-efficacy and outcome expectations); (d) parental expectations to planning (via aspirations); (e) congruence to planning (via self-efficacy, outcome expectations, and aspirations); (f) congruence to planning (via self-efficacy and outcome expectations); (g) parental expectations to exploration (via self-efficacy); and (h) congruence to exploration (via self-efficacy).

All indirect effects were significant. We found partial mediation effect for (g) parental expectations to exploration (via self-efficacy; CIs = .04 to .17); and full mediation effects for (a) congruence to aspirations (via self-efficacy and outcome expectations; CIs = .09 to .31); (b) parental expectations to planning (via self-efficacy, outcome expectations, and aspirations; CIs = .12 to .33); (c) parental expectations to planning (via self-efficacy and outcome expectations; CIs = .03 to .16); (d) parental expectations to planning (via aspirations; CIs = .03 to .18); (e) congruence to planning (via self-efficacy, outcome expectations, and aspirations; CIs = .19 to .47); (f) congruence to planning (via self-efficacy and outcome expectations; CIs = .13 to .38); and (h) congruence to exploration (via self-efficacy; CIs = .16 to .34).

Discussion

This study tested the relationships between perceived parental influences (parental career expectations and adolescent–parent career congruence) and adolescents' career aspirations and the career actions of planning and exploration. We employed

a sample of adolescents from a collectivist context, used the SCCT framework, and integrated the views of Bandura (1999, 2000) and Lent et al. (1994) in developing the hypotheses. The findings of this study expand the range of correlates of career behaviours in collectivist cultures (e.g., Garcia et al., 2012; Leung et al., 2011; Wang & Heppner, 2002) and extend previous SCCT-based studies carried out in Western contexts, which have demonstrated various ways by which proximal contextual variables related to career goals and actions (e.g., Lent et al., 2001, 2003, 2005).

This study contributed to the literature in a number of important ways. First, we demonstrated that parental career expectations were associated with adolescents' career aspirations, directly and indirectly via adolescents' self-efficacy and outcome expectations. Second, we showed that adolescent–parent career congruence was associated with adolescents' career aspirations, but indirectly only via self-efficacy and outcome expectations. These findings provide partial support for Lent et al.'s (1994) view and Bandura's (1999, 2000) approach regarding the relationship between proximal contextual variables and goals. Although most of the earlier SCCT studies in Western contexts demonstrated indirect relationships between proximal contextual variables and goals (e.g., Lent et al., 2001, 2003), our findings suggest two routes by which parental variables relate to adolescents' career aspirations: first, they (i.e., parental career expectations) have a direct association, and second, they (i.e., parental career expectations and adolescent–parent career congruence) serve as proximal sources of adolescents' self-efficacy information, which is subsequently translated into career aspirations via the development of outcome expectations. The first result is consistent with Tang et al.'s (1999) study with participants from a collectivist cultural background, in which the parental variable was found to have a direct relationship with career choice. The second finding is in line with Oettingen and Zosuls (2006) proposition regarding the key roles of parents in shaping collectivist adolescents' efficacy beliefs.

Adolescent–parent career congruence was more strongly associated with self-efficacy than parental career expectations. This finding indicates that although consideration of parental career expectations is important, being congruent with parents regarding career issues is more influential, and is likely to be the main driver of boosting adolescents' confidence in dealing with career tasks. Importantly, self-efficacy served as a mechanism by which parental career expectations and adolescent–parent career congruence exerted most of their effects on career aspirations and the career actions of planning and exploration. These findings support previous study that involves adolescents from a collectivist background, in which high student ratings of parental actions were shown to relate positively to self-efficacy (Garcia et al., 2012).

While studies in a Western context have demonstrated support for the indirect relationships between proximal contextual influences and career actions (e.g., Lent et al., 2003), our findings showed (a) that self-efficacy carried the effects of both parental variables to adolescents' career exploration; and (b) that parental career expectations also were associated directly with this career action. As the relationship between career aspirations and career exploration was not significant, these adolescents are likely to explore career information based on their perceived

parental career expectations, perceived congruence with parents regarding career matters, and confidence in handling career-related task, regardless of their career aspirations. These findings are in line with Lent et al.'s (2000) view and Leong and Serafica's (1995) opinion that the influence of significant others on individual career choices and behaviour in a collectivist context might be stronger and more direct. They also confirm Shea et al.'s (2007) findings that adolescents from collectivist societies are likely to consider parents' wishes when taking career-related actions.

We did not find direct associations between the parental variables and career planning. There were, however, significant indirect paths from both parental variables to career planning: first, via self-efficacy, outcome expectations, and career aspirations, and second, via self-efficacy and outcome expectations. In addition, parental career expectations were associated with career planning via career aspirations alone. This suggests that the contributions of both parental variables in fostering adolescents' capacity to outline their career plans result from parents' contribution to efficacy development and fostering career aspirations. Accordingly, these results regarding the relationships between the parental variables and the career actions of planning and exploration provide partial support for Lent et al.'s (1994) direct hypothesis. The results also support Bandura's (1999, 2000) indirect hypotheses, that proximal contextual variables also related to career actions indirectly by way of self-efficacy and goals.

In summary, by being one of the few studies to date to investigate career development in a collectivist cultural context, this study highlighted the key roles that perceived parental career expectations and adolescent–parent career congruence play in the development of adolescent career aspirations and the career actions of planning and exploration. From the SCCT perspective (Lent et al., 1994), this study demonstrated that adolescents are more agentic when they perceive higher levels of parental career expectations and a higher degree of congruence with parents regarding career matters. This study also contributed to our understanding of how interdependent agency works in collectivist cultures, where individual aspirations and actions are constructed in line with significant others' expectations and behaviours (Kitayama & Uchida, 2005).

Our results suggest that, (a) when assisting adolescents to clarify and/or develop career aspirations, counsellors need to be cognisant of adolescents' levels of career confidence and outcome expectations. They also need to be aware of adolescents' perceived parental career expectations and career congruence with their parents; (b) when devising interventions to enhance career confidence in this context, counsellors should explore the adolescents' perceptions of what their parents expect. In addition, they should explore how these expectations dovetail with the adolescents' own capacities, and examine how they perceive their parents as meeting their career-related needs; (c) when assisting adolescents struggling with their career progress, it is important for counsellors to explore their self-efficacy, perceived parental career expectations, and congruence with parents regarding career matters; and (d) when helping adolescents outline their career plans, counsellors primarily need to probe their outcome expectations and career aspirations. Additionally, they need to take into consideration adolescents' self-efficacy, as well as their perceived parental career expectations and congruence with parents regarding career matters.

Our results also suggest that those working with adolescents should help them: (a) to identify and to be aware of parental career expectations and their degree of career congruence with parents; (b) to understand how these parental variables affect their self-efficacy, career aspirations, planning, and exploration; (c) to master the skills to reconcile their capacities with parental actions; and (d) to communicate their career aspirations and needs in order to obtain relevant responses (e.g., support, expectations) from parents. Additionally, the results suggest that parents should: (a) be aware of the effects of both their career expectations for their children and level of career congruence with their children on the children's self-efficacy, career aspirations, planning, and exploration; (b) develop a realistic understanding of their children's career-related capacities as well as determine the type and level of support they might give to their children; and (c) become familiar with current, relevant career information, so that this might inform their career expectations and the support they provide.

Our study tested the well-supported SCCT model containing parental variables, career aspirations, and action outcomes using a sample of adolescents from a collectivist society (i.e., Indonesia). Future research needs to replicate these findings in other collectivist countries, and the model should be tested also in Western countries. Our use of high school students from one collectivist country limits the external validity of the results of the study. Hence, caution should be taken when generalising the findings to other collectivist adolescent subgroups, such as middle school and university students from the same country, or other groups of adolescents from other collectivist countries. Further, these data were collected at one point in time. Therefore, future studies should test this model longitudinally to examine the temporal relationships between the parental variables and career aspirations and actions. Longitudinal design is also needed to investigate the cyclical nature of the SCCT variables, which have been suggested by career researchers (e.g., Lent et al., 2000), but remains untested in collectivist cultural contexts. Through a longitudinal study, a more comprehensive understanding of the dynamics of adolescent career aspirations and actions at this age and in this context can be obtained. Further, more definitive causal statements can also be made.

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