



## Post-retirement voluntary work and psychological functioning among older Chinese in Hong Kong

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**Abstract.** This study examined demographic and psychosocial differences between older Chinese volunteers and non-volunteers. The influences of work-related factors on older Chinese volunteers' post-retirement psychological functioning and life satisfaction were also explored. A total of 501 older Chinese in Hong Kong were individually interviewed. About 65% of them were involved in community voluntary work since their retirement, with an average of four hours per week. Compared to those without voluntary work experiences, older Chinese volunteers had higher educational attainment and reported better physical health, higher self-efficacy, greater life satisfaction, and less psychological distress. Results from hierarchical regression analyses showed that salient correlates of a low level of psychological distress in older Chinese volunteers were high educational attainment, high self-efficacy, perceived good physical health, and high levels of perceived rewards and satisfaction from voluntary work. Self-efficacy and perceived rewards from voluntary work were also salient correlates of life satisfaction for older Chinese volunteers. As hypothesized, work-related factors of perceived rewards and work satisfaction remained significant correlates of older volunteers' psychological well-being, even after controlling for demographic and individual psychosocial factors. Limitations and implications of the study were also discussed.

**Keywords:** Older Chinese volunteers, Older Chinese well-being, Post-retirement voluntary work

### Introduction

Older people often perceive retirement not only as a loss of a job, but also as a loss of independence, identification, direction, or even meaning of life. Thus, retirement is frequently identified as a risk marker of psychological ill-health (Bosse, Aldwin, Levenson, & Ekerdt, 1987; Frank et al., 2002; Lapierre, Pronovost, Dube, & Delisle, 1992) and/or low life satisfaction (Elwell & Maltbie-Crannell, 1981). From a more positive perspective, retirees can maintain or even improve their psychological well-being by spending time with their family, learning new things and skills, and developing new hobbies and interests (Midanik, Soghikian, Ransom, & Tekawa, 1995; Reitzes, Mutran, & Fernandez, 1996). Retirees can also continue to pursue a productive and

socially meaningful role in society by volunteering (Cnann & Cwikel, 1992; Ellis, 1993; Herzog & House, 1991). Similar to other countries, contemporary Chinese societies are rapidly aging. However, there is a paucity of studies on volunteerism among Chinese retirees. This study aimed to examine demographic and psychosocial differences between older Chinese volunteers and non-volunteers. In addition, influences of work-related factors on volunteers' post-retirement psychological adjustment and life satisfaction were also explored.

### *Older people and voluntary work*

Volunteering is a planned behavior that provides services for others without monetary reward (Penner, 2002). With global aging, the older population has become an invaluable source of community voluntary workers for various human service organizations (Black & DiNitto, 1994; Choi, 2003; Cnaan & Cascio, 1999; Kincade et al., 1996). The rate of older volunteering is expected to rise as a result of changing demographics such as longer life expectancy, better health conditions, and improved education; alongside with active promotion of older volunteerism by local and national governments (Chambre, 1993). For example, the United States has reported a substantial increase in the proportion of older volunteers from 11% in 1965 to 41% in 1990 (Marriott Senior Living Services, 1991).

Research has shown that demographic profiles are different between older non-volunteers and volunteers. Compared to the former, older volunteers are more likely to have higher educational attainment (Aquino, Russell, Cutrona, & Altmaier, 1996; Chambre, 1984; Choi, 2003; Cohen-Mansfield, 1989; Fischer Mueller & Cooper, 1991; Kincade et al., 1996; Marriott Senior Living Services, 1991). Earlier studies also showed that older volunteers were more likely to be married than non-volunteers (Chambre, 1984), but more recent studies do not support this finding (Choi, 2003). A majority of studies have found that compared to older men, older women are more likely to volunteer (Chambre, 1984; Cohen-Mansfield, 1989; Gallagher, 1994), especially in care-giving services (Fisher et al., 1991; Fisher & Schaffer, 1993). However, more recent studies have failed to find gender differences in retirees' likelihood to volunteer, amount of time spent on volunteer work, and types of voluntary services (Choi, 2003; Pushkar, Ries, & Morros, 2002; Smotkin, Blumstein, & Modan, 2003).

Individual factors such as physical health status may affect retirees' participation in voluntary work. Compared to older non-volunteers, older volunteers tend to perceive themselves as having better physical health (Caro &

Bass, 1997; Choi, 2003; Fischer et al., 1991; Kincade et al., 1996; Warburton, Le-Brocque, & Rosenman, 1998; Van Willingen, 2000). It is possible that retirees with poor physical health will have less mobility, ability, and time to provide voluntary services, especially among those with medical conditions that require regular follow-up visits to doctors (Schneider, 1999). Another important individual factor influencing post-retirement volunteerism is self-efficacy. Self-efficacy refers to a broad and stable sense of personal competence in dealing with stressful situations (Schwarzer, 1993). As non-efficacious people often possess pessimistic beliefs toward self and accomplishment (Bandura, 1997), they tend to avoid challenges and new experiences. Thus, they are less likely to participate in voluntary work after their retirement. Furthermore, compared to older non-volunteers, older volunteers tend to report higher life satisfaction, more positive post-retirement adjustment, and fewer depressive symptoms (Dorfman & Rubenstein, 1993; Howard, 1992; Morrow-Howell, Hinterlong, Rozario, & Tang, 2003; Musick & Wilson, 2003; Shmotkin et al., 2003; Thoits & Hewitt, 2001; Van Willingen, 2000; Wheeler, Gorey, & Greenblatt, 1998).

More recent studies have also explored factors that can enhance positive aspects of volunteering to ensure the contribution of older volunteers can benefit themselves as well as those receiving their services. According to literature on paid workers, work-related factors such as work satisfaction and rewards are consistently found to be related to psychological well-being (Arafa, Nazel, Ibrahim, & Attia, 2003; De Jonge, Bosma, Peter, & Siegrist, 2000; Jain, Lall, McLaughlin, & Johnson, 1996) and/or few adverse mental health outcomes such as mental and burnout symptoms (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Lee & Ashforth, 1996; Van der Hulst & Geurts, 2001). Similarly, greater perceived rewards from voluntary work were found to relate to fewer burnout symptoms among young AIDS volunteer helpers (Bennett, Ross, & Sunderland, 1996) and lower depression levels among older volunteers (Musick & Wilson, 2003). For older volunteers, possible symbolic or intrinsic rewards from voluntary work include opportunities to fill the vocational void left by retirement, to learn new things, to become a useful member of society, to help other people, and to find a new peer group (Barlow & Hainsworth, 2001; Cnaan & Cascio, 1999; Cnaan & Cwikel, 1992; Fischer & Schaffer, 1993; Grube & Piliavin, 2000; Herzog & House, 1991; Kovacs & Black, 1999; Lammers, 1991).

### *Older Chinese and volunteerism*

Similar to other Chinese societies, Hong Kong is rapidly aging. People aged 60 years or older currently comprise about 15% of the total population in

Hong Kong. This percentage is expected to rise continuously in coming years with the lengthening of life expectancy and decreasing in birth rate. Despite the fact that the majority of this population has retired from full-time employment at about age 60, their experiences and expertise are precious resources to the society. They contribute a significant pool of human resources for social service organizations, which are facing a great demand on their services but a sharp reduction in the government subsidies to their expenditure. Local researchers have also opined that older Chinese should be actively recruited to voluntary services to enable them to continue to play an active and productive role in the community (Chong, 1993).

There is a paucity of studies on volunteerism in contemporary Chinese societies, especially on older volunteers. In general, the participation rate in voluntary work is lower among older Chinese as compared to their Western counterparts. According to a recent telephone survey in Hong Kong (Chung, 2002), one-quarter of the surveyed individuals had participated in voluntary work and only 13% of these volunteers were older adults. It should be noted that there are aspects of Chinese traditions that may act as pull and push factors of volunteerism. On the one hand, ethical principles of filial piety may deter retirees from participating in voluntary services. According to these ethical principles, older people should enjoy their retirement years at home with their adult offspring and grandchildren. It may become a source of public shame to the family and their adult offspring if older people continue to work, even without pay, after their retirement. This may be perceived by others that the former has not provided well for their aging parents. On the other hand, traditional Chinese attitudes are favorable to volunteerism in general. It is believed that people will have a better luck and a better after-life by being good to others, especially to less fortunate people. Furthermore, being highly collectivistic, Chinese always believe that the basic unit of survival lies in the group rather than within the individual (Hui & Yee, 1994; Triandis, Bontempo, Villareal, Asai, & Lucca, 1998). Most Chinese view that cooperating with others is of a higher priority than pursuing individual interests, and effort and contributions should be directed toward collective good rather than toward individual benefit.

### *Purposes of the present study*

The older population in Chinese societies is estimated to account for approximately a quarter of the world's older population by the middle of this century (Lutz, Prinz, & Langgasser, 1994). However, very little is known about volunteerism among Chinese retirees. Similar to other rapidly aging societies, Chinese retirees contribute an important pool of human resources for social

service organizations. To facilitate the recruitment of retirees to voluntary work, it is important to identify characteristics that distinguish between those who would participate in voluntary services and those who would not. Thus, the first objective of this study was to examine demographic and psychosocial differences between older Chinese volunteers and non-volunteers. Based on past literature, it was hypothesized that older Chinese volunteers would have better post-retirement adjustment than non-volunteers, with the former reporting greater life satisfaction and fewer psychological distress than the latter. Furthermore, it was hypothesized that older Chinese with high educational attainment would be more likely to participate in voluntary work than those with low educational attainment. As compared to non-volunteers, older Chinese volunteers would also report better physical health and higher self-efficacy.

The rate of elderly volunteering in contemporary Chinese societies is expected to continue to rise as a result of longer life expectancy and active promotion of local and national governments. Factors that can enhance positive influences of volunteerism are in need of attention to facilitate the continuation of services among older volunteers. Thus, the second objective of this study was to determine salient correlates of psychological well-being and life satisfaction among older Chinese volunteers. In particular, the importance of factors in relation to voluntary work as compared to other individual factors would also be explored. Based on past literature, good physical health status, greater self-efficacy, and high levels of satisfaction and symbolic rewards of voluntary work were significant correlates. In addition, work-related factors of satisfaction and perceived rewards from participating in voluntary services would remain salient correlates of old volunteers' psychological functioning and life satisfaction, even after controlling for demographic and individual psychosocial factors.

## **Method**

### *Participants*

Five-hundred-and-one (107 male and 394 female) participants were individually interviewed. Their age ranged from 60 to 91 years old, with the mean age being 71.95 (SD = 7.47). Slightly less than half (47%) of the participants were married, and remaining participants were widowed, divorced, or never married. The majority (71%) of participants lived with their family, about 28% lived alone, and only 1% lived with their friends. Participants' monthly family income was as follows: below US\$1,300 (71%), from

US\$1,301 to 2,600 (20%), and above US\$2,601 (9%). About two-thirds of them obtained no or primary school education, and the remaining had either secondary or tertiary educational attainment. There was no gender difference on age ( $t(499) = -1.77, p > .05$ ), living arrangement ( $\chi^2(1) = 1.08, p > .05$ ), and monthly family income ( $\chi^2(2) = 0.26, p > .05$ ). Compared to older women, a higher proportion of older men attained secondary schooling or above (17% vs. 36.4%;  $\chi^2(1) = 19.07, p < .05$ ) and were married at the time of this study (39.5% vs. 74.8%;  $\chi^2(1) = 41.86, p < .05$ ).

### *Instruments*

#### *Psychological distress*

The Chinese version of the 12-item General Health Questionnaire (GHQ; Goldberg, 1978) was administered to measure participants' non-psychotic psychiatric problems. This scale showed satisfactory internal consistency and correlated with scales on depression and physical health among older Chinese samples (Boey & Chui, 1998). Participants rated the frequency of different psychological symptoms on a 4-point scale, with higher scores representing greater frequency of various depicted symptoms.

#### *Life satisfaction*

Five-item Satisfaction With Life Scale (LS; Diener, Emmons, Larsen, & Griffin, 1985) was used to assess participants' global perception and feeling about their present life. This scale demonstrated good psychometric properties when used with Chinese samples. Participants responded to each item on a 4-point scale, with higher scores indicating greater life satisfaction.

#### *Perceived rewards*

Perceived rewards from volunteer work were measured by the 12-item Expectation Fulfillment Index adopted from a previous study on young Chinese volunteers (Yiu, Au, & Tang, 2001). Examples of depicted rewards were acquisition of new knowledge and contribution to society. This scale was correlated with Chinese volunteers' work satisfaction and involvement in activities organized by their voluntary organizations and/or voluntary peer groups (Yiu et al., 2001). Participants rated each item on a 4-point scale, with higher scores indicating greater perceived rewards.

#### *Work satisfaction*

Satisfaction with voluntary work was measured by a single item stating "Overall, how satisfied are you with the volunteer work?" (World Values

Survey Group, 1994). Participants rated their satisfaction level on a 10-point scale, with 1 as “extremely dissatisfied” and 10 as “extremely satisfied.” Higher scores represent greater satisfaction with voluntary work.

### *Self-efficacy*

The 10-item Generalized Self-Efficacy Scale assesses the strength of people’s belief in their own ability to respond to novel or difficult situations and to deal with any associated obstacles or setbacks (Schwarzer, 1993). This scale has been translated into several languages, with satisfactory internal reliability among Chinese samples (Zhang & Schwarzer, 1995). Participants rated each item on a 4-point scale rating from “strongly disagree” to “strongly agree.” Higher scores indicate higher levels of general self-efficacy.

### *Perceived physical health*

A self-constructed item was used to assess participants’ subjective physical health status. Participants were asked to rate their physical health on a 5-point scale, with higher scores indicating poorer health.

### *Voluntary service experiences*

Participants were asked to indicate whether or not they had any past or current experience of voluntary work since their retirement. For those who had voluntary work experiences, they were also asked to indicate the type and length of their service.

### *Demographics*

Participants were asked to provide information on their age, gender, marital status, living arrangement, educational attainment, and monthly family income.

### *Procedure*

The present investigators randomly selected 23 community centers from the local social service directory for older people in Hong Kong and then approached their administrators by letters to invite their members to participate in the present study. Among those contacted, administrators of 18 community centers accepted the invitation and referred their members to the investigators. Referred members were then individually interviewed by trained research assistants in rooms provided by community centers. Before the start of the interview, purposes of the study were explained, anonymity of responses was reassured, and consent forms were signed. The interview took about 40 minutes to complete and included items on participants’ demographics, sense of

competency, physical and mental health status, life satisfaction, and voluntary work experiences since retirement. For those with voluntary work experiences, years and types of experiences, work satisfaction, and perceived rewards from voluntary work were also asked. Participants did not receive any monetary reward for their participation and could withdraw from the study at any time. A souvenir was given to participants as a token of appreciation. About 13% of the referred older people refused to participate in the study, with main reasons being either too tired or not having time. A total of 518 older people completed the interview. Data of 17 participants were excluded in subsequent analyses as they had either full- or part-time employment at the time of the study. The present sample thus comprised of 501 older Chinese retirees.

## Results

### *Comparing older Chinese volunteers and non-volunteers*

Among the participants, 65.4% ( $n = 328$ ) reported voluntary work experiences since their retirement. The length of their voluntary services ranged from one year to over 50 years, with the average length being 6.5 years. Among older Chinese volunteers, they provided an average of four hours of volunteer services per week. The length of volunteer services did not vary with participants' gender, marital status, living arrangement, and monthly family income ( $p > .05$ ). However, those with higher educational attainment tended to provide longer service hours per week ( $t(301) = 3.03$ ,  $p < .05$ ). Most participants assisted in organizing activities of community centers for older people (54%) or paying visits to older service recipients on an irregular basis (54%).

In order to investigate how demographic and psychosocial characteristics varied with volunteer status, all participants were classified either as volunteers ( $n = 328$ ) or as non-volunteers ( $n = 173$ ) according to their self-reports. Chi-square analyses indicated that these two groups did not differ on age, gender, living arrangement, monthly family income, and marital status ( $p > .05$ ). However, compared to non-volunteers, more older volunteers had secondary schooling or above (12.7% vs. 25.6%;  $p < .05$ ). Descriptive statistics of perceived physical health, self-efficacy, psychological distress, and life satisfaction as broken down by volunteers and non-volunteers were summarized in Table 1.

A series of  $2 \times 2$  (gender  $\times$  volunteer status) analyses of variances were performed to determine group differences on major variables, and results are summarized in Table 1. Possible gender  $\times$  volunteer status 2-way interaction



Table 1. Descriptive statistics and internal consistency of major variables

Variables	Alpha	Volunteers (N = 328)		Non-volunteers (N = 173)		Main effect on volunteer status (F value)
		M	SD	M	SD	
Perceived poor health	—	2.86	.90	3.36	.93	33.09*
Self-efficacy	.93	2.84	.48	2.58	.59	23.43*
Psychological distress	.84	1.71	.45	2.10	.54	66.19*
Life satisfaction	.87	3.00	.51	2.78	.60	16.36*
Work satisfaction	—	7.50	1.94	—	—	—
Perceived rewards	.71	3.19	.32	—	—	—

\*  $p < .001$ .

effects on these variables were also tested. Results showed that there was no significant gender  $\times$  volunteer status 2-way interaction effect on major variables ( $p > .05$ ). Significant main effects of volunteer status were found on physical health, self-efficacy, psychological distress, and life satisfaction ( $F = 33.09, 23.43, 66.19, 16.36$ , respectively;  $p < .001$ ). Compared to older non-volunteers, older volunteers reported better physical health, higher self-efficacy, greater life satisfaction, and less psychological distress. Significant gender main effects were also found on self-efficacy and life satisfaction ( $F = 10.25, 16.35$ , respectively;  $p < .001$ ). Compared to older women, older men tended to report higher levels of self-efficacy and life satisfaction.

*Determining correlates of psychological functioning for older Chinese volunteers*

Hierarchical multiple regression analyses were performed to determine salient correlates of psychological functioning among older Chinese volunteers ( $n = 328$ ), taking shared variances of various correlates into consideration. The hypothesized correlates included demographic factors, individual physical and psychosocial characteristics, and voluntary-work related factors. Block 1 of the regression analyses included demographic characteristics of age, gender, marital status, educational attainment, and years of voluntary services. Block 2 included physical health factor of volunteers' perceived physical health status. Block 3 included individual psychosocial characteristics of self-efficacy. Work-related factors of perceived satisfaction and rewards from voluntary work were entered as Block 4. Regression analyses were then conducted separately for psychological distress and life satisfaction,

which were negative and positive indicators of older volunteers' psychological functioning. Detailed results of these regression analyses are summarized in Tables 2 and 3.

For psychological distress, all four blocks of factors were significant and accounted for a total of 36% of the variances. Results showed that demographic factors, especially educational attainment, were significant correlates of older volunteers' psychological distress ( $R^2 = .079$ ,  $p < .01$ ). Subjective physical health status and self-efficacy were also significant correlates after controlling for participants' demographic characteristics ( $R^2$  change = .116, .102, respectively;  $p < .01$ ). Finally, voluntary work-related factors of perceived satisfaction and rewards from voluntary work remained significant correlates, even after controlling for participants' demographic and psychosocial characteristics ( $R^2$  change = .062,  $p < .01$ ).

For life satisfaction, all four blocks of factors were significant and accounted for a total of 24.9% of the variances. Results showed that demographic factors, especially years of voluntary services, were significant correlates of older volunteers' satisfaction with life ( $R^2 = .039$ ,  $p < .01$ ). Subjective physical health status and self-efficacy were also significant correlates after controlling for participants' demographic characteristics ( $R^2$  change = .033, .142, respectively;  $p < .01$ ). Finally, voluntary work-related factors, especially perceived rewards from voluntary work, remained significant correlates, even after controlling for participants' demographic and psychosocial characteristics ( $R^2$  change = .035,  $p < .01$ ).

## Discussion

### *Psychosocial differences between older Chinese volunteers and non-volunteers*

The first objective of this study was to examine demographic and psychosocial differences between older Chinese volunteers and non-volunteers. The present findings supported the main hypothesis that older Chinese volunteers, as compared to non-volunteers, were more satisfied with life and reported fewer psychological symptoms. The positive association between volunteerism and post-retirement mental well-being is consistent with past literature on older Western samples (Dorfman & Rubenstein, 1993; Morrow-Howell et al., 2003; Musick & Wilson, 2003; Shmotkin et al., 2003; Van Willigen, 2000; Wheeler et al., 1998) and can be explained by both enhancement and healthy worker effects (Thoits & Hewitt, 2001).

According to the enhancement effect, voluntary work can promote retirees' psychological well-being and life satisfaction by increasing their

Table 2. Results of regression analysis of psychological distress among older volunteers (n = 328)

Model	Variables in the model	R <sup>2</sup> change	F change	Beta	t	Sig.
1.	(Constant)	.079	5.418		5.465	.000
	Age			.059	.962	.337
	Gender			-.150	-2.534	.012
	Marital status			.003	.043	.966
	Education			-.187	-3.247	.001
	Years of voluntary services			-.072	-1.242	.215
	2.			(Constant)	.116	45.403
Age		.062	1.081	.280		
Gender		-.137	-2.473	.014		
Marital status		.003	.048	.962		
Education		-.176	-3.259	.001		
Years of voluntary services		-.047	-.869	.385		
Poor physical health		.343	6.738	.000		
3.	(Constant)	.102	45.625		7.292	.000
	Age			.001	.023	.982
	Gender			-.080	-1.521	.129
	Marital status			-.020	-.381	.703
	Education			-.117	-2.279	.023
	Year of voluntary services			-.046	-.897	.370
	Poor physical health			.223	4.397	.000
	Self-efficacy			-.358	-6.755	.000
4.	(Constant)	.062	14.983		8.349	.000
	Age			.009	.182	.856
	Gender			-.052	-1.023	.307
	Marital status			-.033	-.664	.507
	Education			-.122	-2.473	.014
	Year of voluntary services			.021	.426	.670
	Poor physical health			.240	4.933	.000
	Self-efficacy			-.307	-5.929	.000
	Work satisfaction			-.206	-4.257	.000
	Perceived rewards			-.125	-2.631	.009
	R-square of the finalized model			.360		

*Table 3.* Results of regression analysis of life satisfaction among older volunteers ( $n = 328$ )

Model	Variables in the model	R <sup>2</sup> change	F change	Beta	<i>t</i>	Sig.
1.		.039	2.563			
	(Constant)				9.740	.000
	Age			-.061	-.981	.327
	Gender			.094	1.546	.123
	Marital status			.027	.440	.660
	Education			.040	.678	.498
	Year of voluntary services			.158	2.680	.008
2.		.033	11.210			
	(Constant)				10.439	.000
	Age			-.063	-1.024	.307
	Gender			.087	1.454	.147
	Marital status			.026	.446	.656
	Education			.034	.586	.558
	Year of voluntary services			.145	2.491	.013
Poor physical health	-.183	-3.348	.001			
3.		.142	56.660			
	(Constant)				4.233	.000
	Age			.009	.149	.882
	Gender			.019	.345	.730
	Marital status			.053	.964	.336
	Education			-.036	-.659	.510
	Year of voluntary services			.143	2.668	.008
	Poor physical health			-.042	-.783	.434
Self-efficacy	.422	7.527	.000			
4.		.035	7.149			
	(Constant)				1.764	.079
	Age			.007	.123	.902
	Gender			-.002	-.043	.966
	Marital status			.061	1.132	.258
	Education			-.039	-.732	.465
	Year of voluntary services			.098	1.809	.071
	Poor physical health			-.054	-1.031	.303
	Self-efficacy			.396	7.066	.000
	Work satisfaction			.064	1.225	.222
Perceived rewards	.170	3.303	.001			
	R-square of the finalized model	.249				

psychological and social resources (Musick & Wilson, 2003). Studies on older Western samples have shown that voluntary work can enhance a sense of competence and control (Midlarsky, 1991; Newman, Vasudev, & Onawola, 1985; Thoits & Hewitt, 2001), compensate the loss of roles with socially meaningful activities (Chambre, 1984; Cnaan & Cwikel, 1992; Herzog & House, 1991), reduce social isolation and/or increase emotional and instrumental support (Musick & Wilson, 2003), and provide symbolic rewards such as learning new things and meeting new friends (Barlow & Hainsworth, 2001; Cnaan & Cascio, 1999; Kovacs & Black, 1999; Lammers, 1991). The present investigators argue that voluntary work among older Chinese has similar enhancement effect on psychological and social resources, which in turn foster their positive post-retirement adjustment. Thus, older Chinese volunteers tended to report better psychological functioning than non-volunteers.

Another plausible explanation for the association between older volunteerism and psychological well-being is the health worker effect. It may be that older people with poor physical and mental health tend not to participate in voluntary work because they may have limited mobility, ability, and time (Schneider, 1999). This is especially evident among those who have complicated medication regime with side-effects as well as among those who need to attend regular medical follow-up. Furthermore, recruiters of voluntary workers are also more likely to invite older people with good physical and mental status to join the voluntary team. Thus, the observation that volunteers as compared to non-volunteers possessed better psychological functioning may be related more to selection bias than positive influences of volunteering.

As hypothesized, individual psychosocial characteristics also differed between older Chinese volunteers and non-volunteers. The present study showed that compared to older Chinese non-volunteers, volunteers reported higher levels of self-efficacy and better physical health. These findings are consistent with previous research that documents older volunteers tend to perceive themselves as physically healthy and competent in coping with new and challenging experiences (Caro & Bass, 1997; Choi, 2003; Fisher et al., 1991; Kincade et al., 1996; Warburton et al., 1998; Van Willigen, 2000). As discussed in the association between older volunteerism and psychological well-being, individual psychosocial differences between older volunteers and non-volunteers can be understood in light of both enhancement and healthy worker effects. It is possible that involvement in volunteer work can promote Chinese retirees' physical health and sense of competency, or physically healthy and self-confident Chinese retirees are more likely to participate in voluntary work.

Previous studies on differences in demographic profiles of older volunteers and non-volunteers are equivocal (Choi, 2003; Pushkar et al., 2003;

Smotkin et al., 2003). A more consistent observation is that older volunteers tend to possess higher educational attainment than older non-volunteers (Aquino et al., 1996; Choi, 2003; Fischer et al., 1991; Kincade et al., 1996; Marriott Senior Living Services, 1991). The present study also found that older Chinese volunteers and non-volunteers did not differ in demographic characteristics of gender, marital status, living arrangement, and monthly family income. Compared to older Chinese non-volunteers, older volunteers had higher educational attainment. This is probably related to self-selection bias. It is possible that retirees with a low level of educational attainment may perceive themselves as having insufficient knowledge to cope with new tasks and are unsure of their ability to help others and to learn new things. Thus, they are more hesitant in joining the volunteer team.

### *Correlates of psychological well-being among older Chinese volunteers*

The second objective of this study was to explore correlates of psychological functioning among older Chinese volunteers. In particular, the contribution of factors relating to voluntary work as compared to other individual factors was explored. As hypothesized, perceived rewards and satisfaction from voluntary work remained significant correlates of psychological functioning and life satisfaction, even after controlling for demographic and individual psychosocial factors. This finding is in line with previous studies that indicate a lack of perceived rewards from voluntary work is related to burnout and mental symptoms in young AIDS volunteers (Bennett et al., 1996). As voluntary work does not have explicit extrinsic rewards such as salary or fringe benefits accompanied with paid jobs, volunteers have to rely on symbolic rewards as a source of personal accomplishment and satisfaction (Black & DiNitto, 1994). For Chinese, altruistic behaviors are greatly valued as the basic tenet of collectivistic traditions is to contribute to the collective good rather than toward individual benefit (Hui & Yee, 1994; Triandis et al., 1998). Voluntary work thus provides an important channel of gaining intrinsic rewards for Chinese retirees, which in turn have positive influences on their well-being and satisfaction with life.

The present study also found that individual psychosocial factor of self-efficacy is a salient correlate of older Chinese volunteers' psychological well-being and life satisfaction, even after controlling for demographic characteristics and physical health. This finding is similar to previous studies that indicate perceptions of personal competence in performing the desired behaviors are often related to psychological adjustment among Western (Holahan & Holahan, 1987; Johnson, Stone, Atmaier, & Berdahl, 1998) and Chinese older samples (Wu, Tang, & Kwok, 2004). Both physical health and educational

attainment were also correlates of psychological well-being of older Chinese volunteers. It is possible that physically healthy older volunteers may have more time and energy to participate in a wide array of voluntary work, such as paying visits to their clients or organizing activities. Furthermore, those with high educational attainment are more likely to be elected as representatives, trainers, or leaders of volunteer groups. Thus, physically healthy and better educated older volunteers may have more opportunities to acquire new skills, meet new friends, or develop a sense of accomplishment; which will in turn enhance their psychological functioning (Choi, 2003; Dorfman & Rubenstein, 1993; Thoits & Hewitt, 2001).

### *Limitations and implications*

Results of this study should be interpreted with caution. First, a majority of older volunteers in the present study worked for community centers for older people. Older volunteers who served other types of human service organizations such as centers for children or people with special needs were not recruited in this study. Therefore, the present sample might not be representative of the population of older Chinese volunteers in Hong Kong. Second, this study relied on self-reports of older volunteers in relation to their psychological functioning, perceived physical health, self-efficacy, and voluntary work experiences. These self-reports might be subject to recall and social desirability bias, thus, external validation should have been collected from family members or serving organizations. Third, the cross-sectional design of this study only reflected pattern of associations among variables, and no causal effect could be confirmed. A longitudinal design with assessment at different time points will provide more detailed information regarding how various factors influence psychological functioning of older volunteers.

Despite these limitations, the present findings have important practical implications. Chinese retirees should be encouraged to participate in voluntary work, which is related to their overall well-being. In Chinese societies such as Hong Kong, adult offspring are responsible to take care of their aging parents, who are not expected to work outside their family after retirement. Thus, public education should be launched to promote healthy aging and older volunteerism. Potential rewards of voluntary services for older people and the valuable contribution they can make to their peers and community should be emphasized, so that the public will encourage and support their older family members to participate in voluntary work. Physical health of older people should also be promoted to increase their participation in voluntary services. In addition, different voluntary work types can be designed and promoted, in

order to encourage older adults with low educational attainment to join the voluntary team.

For older people who have already joined the voluntary services, their psychological functioning may be further enhanced through increasing their sense of self-efficacy (i.e., individual factor) as well as their satisfaction and symbolic rewards from voluntary work (i.e., work-related factors). In order to achieve these goals, organizations can provide regular work-related training programs to older volunteers, match their interests with their abilities in work assignment, arrange practical experiences in a variety of voluntary services, and provide feedback on their performance. Public recognition of services provided by older volunteers, such as issuing letters of appreciation and presenting awards to outstanding and long-service volunteers, can also increase their work satisfaction. Organizations should also facilitate close interaction among older volunteers, clients, family members, and staff through sharing sessions and regular social activities to enable them to find new peer groups and establish new social support network.

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