

CITY UNIVERSITY OF HONG KONG

**Self-construal and Subjective Well-being
among Chinese University Students:
The Mediation Effect of Optimism**

A Report Submitted to
Department of Applied Social Studies
in Partial Fulfillment of the Requirements for
the Bachelor of Social Sciences in Psychology

by

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Abstract

Objectives. The current study examined the predictive power of self-construal on optimism and subjective well-being, and the association between optimism on subjective well-being. The mediation effect of optimism on the link between self-construal and subjective well-being was explored too.

Methods. Undergraduate participants were recruited from Hong Kong, Malaysia, Mainland China and Taiwan and asked to complete a questionnaire in either hard copy or soft copy online. Particularly, the questionnaire consisted of five parts: (1) Self-Construal Scale; (2) the revised Life Orientation Test; (3) the Satisfaction with Life Scale; (4) Subjective Happiness Scale; and (5) demographic information.

Results. Optimism was found to be associated positively with life satisfaction and subjective happiness, respectively. Only independent self, but not interdependent self, correlated significantly with optimism. None of the effect of the two selves was found on life satisfaction and subjective happiness, after controlling for the control variables. Optimism was found to be a significant mediator in the relationship between independent self and life satisfaction and subjective happiness, respectively. Besides, gender differences were found in independent self, optimism and life satisfaction while parental status differences were found in independent self. Females reported higher scores than males across the three variables while participants that have non-intact

parents reported greater independent self than participants having intact parents

Conclusion. Optimism predicts not only psychological and physical well-being but also subjective well-being. Subjective happiness is suggested to be an essential outcome for studies, especially in the field of Positive Psychology. The stronger independent self predicts greater optimism, regardless the strength of interdependent self. Although no direct effect of independent self on subjective well-being, its effect could be expressed indirectly through the mediation of optimism. Limitations and suggestions for future research were discussed later.

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Chapter 1: Introduction and Literature Review

1.1. Dispositional Optimism and Subjective Well-being

The role of dispositional optimism as a strength has been of interest of researchers in recent few decades and been founded to benefit across both physical and psychological well-being. To avoid any possible and potential bias of extreme stress-group, only related studies with participants without any specific disorders and diseases would be discussed in the following. Everson et al. (1996) conducted a longitudinal study across 2000 Finland participants and founded that optimistic ones had much lower mortality rate than the non-optimistic counterparts. Other studies showed that optimists do better benefit themselves over pessimist with better coping strategies toward stressful stimuli (Scheier et al. 1989), superior work performance (Long, 1993), higher proportions in starting college (Aspinwall & Taylor, 1992), and better performance in school and sports (Buchanan & Sligman, 1995). The level of optimism correlates to the outcome emotions while people react to adversity or stressful events in lives (Scheier, Carver, & Bridge, 2001), correlates positively with adaptive coping, correlates negatively with negative affect and reported symptoms (Andersson, 1996). Some studies with the interests in optimism and distress showed that optimists were prone to report lower degree of distress than do pessimists (Carver & Gaines, 1987; Park, Moore, Turner, & Adler, 1997). The very limited studies on optimism and

well-being that conducted with Chinese samples, using both English and Chinese adapted version of LOT, found consistent findings with those from English-speaking samples (for example, see Lai, 2000; Zhu, 2003). Zhu (2003) was one of the initial investigators who studied optimism (both dispositional optimism and unrealistic optimism, but only the former would be discussed) and both psychological and physical well-being with both Chinese and western samples for his dissertation. Zhu revealed that the relationship, regardless the strength, between dispositional optimism and psychological and physical well-being was consistent in both Chinese and western cultures. In a study on optimism and well-being in Hong Kong Chinese samples with biological-based design, Lai (2005) found that participants with higher optimism scores showed less cortisol secretion in the awakening period, while controlling the effect of pessimism and mood. In a study of the role of optimism among unemployed Hong Kong Chinese female, Lai (1998) found that more optimistic ones handled better psychologically with their unemployment, compared to their less optimistic counterparts. Very recently, Lai (2009) pointed out that optimism reduces the impact of daily hassles and stress on mental health in Chinese adolescent samples.

Despite those well-investigated benefits (see Andersson, 1996, Nes & Segerstrom, 2006), there are limited studies that tell the relationship between optimism and subjective well-being, rather than, somehow objective, pathologic or symptom-based,

psychological and physiological well-being. One of the fundamental differences may be that subjective well-being is less subject to environmental factors than psychological and physiological well-being, as people partially adapt to non-extreme external environment (Diener, 1997). Taken Keyes and Lopez (2002)'s view that subjective well-being and psychological well-being together provide a better, complete picture of mental health, the first concern of this paper, different from most past studies that investigating psychological and physiological well-being, is to investigate the relationship between dispositional optimism and subjective well-being.

Although subjective well-being has been systematically studied since the past two decades, studies that see subjective well-being as one of the possible beneficial outcome of optimism are relatively scarce yet more recent if compared to those well-documented beneficial effect on psychological and physical well-being. Among those limited studies, important findings were found in varying age participants on life satisfaction, which is one of the operational components of subjective well-being. In Isaacowitz (2001)'s study with samples of young, middle-aged and older adults on a longitudinal design, they found baseline correlation between dispositional optimism and well-being in all age groups. Very recently, predictive effect of dispositional optimism ($\beta = .308$, Heo & Lee, 2010) on life satisfaction was found too in a sample of older adults. Alder (2008) concerned about the link between dispositional optimism and life satisfaction with

another sample: urban adolescents, and found direct effect of optimism on life satisfaction. In a study on the effects of optimism on subjective quality of life among college students, Harju and Bolen (1998) divided them into three optimistic group (high and low optimistic were those scored more than or less than reported normative one standard deviation in Scheier et al.,'s (1994) study, respectively; those scored within both were midlevel optimists). They found that high optimists scored the highest on quality of life (i.e. satisfaction) while low optimists scored the lowest. These evidences showed the consistent predictive effect of optimism on life satisfaction across ages in non-Chinese samples. Similar findings were found in studies with Chinese sample. With Hong Kong Chinese elderly as participants, Harju and Bolen (1998) found total predictive effect of optimism on perceived health and life satisfaction; however, financial status fully mediated its effect on the later. Similarly, significant predictive role of optimism on life satisfaction ($\beta=.29$; Wong, 2009) and on depression ($\beta= -.33$; Wong, 2009) was found after controlling the effect of hope among secondary school students in Singapore. Taken those discussed literature and findings into consideration, this study expected to replicate similar predictive power of dispositional optimism on subjective well-being (hypothesis 1).

1.2. Self-construal and Conceptualization of Optimism

Among those studies on optimism, as discussed before, there are some

researchers who paid extra attention to the influence of culture and thus started including non-English-speaking participants in their studies. Chang (1996), with Asian and Caucasian Americans as participants, found that Caucasians were more optimistic than Asian. Similar findings were found in Zhu (2003)'s study too, showing that American students scored higher than their Chinese counterparts on Life Orientation Test. Recently, Fischer and Chalmers (2008) have definitely provided a much more convincing piece of evidence by conducting a meta-analysis which compared all available studies that using all forms of Life Orientation Test (LOT, a test that measures level of optimism). They measured optimism level across 22 nations and found only small cultural differences, however, in systematic and predictable pattern. They pointed out that lower optimism level was correlated to higher collectivistic cultures. It is seemingly safe to conclude that people from western culture are more optimistic than those from eastern culture, though the differences seem to be small. However, Fischer and Chalmer (2008) found no supporting evidences for fundamental cultural differences in optimism. The small but predictive cultural effect suggests the existence of possible mechanism behind. Here comes the question, what is the mechanism then that underlies that relationship between optimistic and culture? Culture is a relatively broad concept that involves components like beliefs, values, and languages. However, there are very limited studies that could tell us exactly what aspects of culture that impact people's

level of optimism. Fischer and Chalmers (2008) suggested self-construal (will be discussed below), which is one widely-used aspect of culture, is a possible variable that underlies the mechanism of relationship between culture and optimism (the second concern of this paper).

Markus and Kitayama (1991, 1994) argued that people from different cultural backgrounds hold different values of self, others, and the relation between self and others, raising the concepts of independent and interdependent views of self. An independent self emphasizes autonomy, uniqueness and disengagement from others, defined by its tendency to realize one's internal attributes such as personal desires and preferences (Kitayama et al., 2007; Markus & Kitayama, 1991, 1994). An interdependent self which values individual's connectedness and interdependence to others, is defined by its tendency to fit in the society and fulfill social norms (Kitayama et al., 2007; Markus & Kitayama, 1991, 1994). Sharing most characteristics respectively by western and Chinese people, it is widely believed that the former hold the independent self-construal (western self) and the latter hold the interdependent self (eastern self).

The different self-construals as self-schemas lead to differences in people's daily practices, behaviors, beliefs and values (Markus & Kitayama, 1991; see also Zhu, 2003 and Lu et. al. 2001), and cognitions, emotions and motivations (see Markus & Kitayama,

1991). For example, independent self-construal sees maturity as ability to be independent, unique and to strive for superiority while interdependent self-construal defines maturity as capability to fit oneself in relationships with others harmonically (Zhu, 2003). Similarly, it is possible that different self-construals affect the conceptualization of optimism.

Scheier and Carver (1985, p. 219) defined optimism as the stable tendency “ [to] believe that good rather than bad things will happen.” Based on their assumption that people would hold expectations about achieving a possible goal, they indicated that optimists would consistently have positive expectations about being able to meet the goal. In other words, optimists in general believe that things will go well, or in their desired ways, in the future. Various versions of LOT were designed and operationalized according to this particular definition. However, Chinese culture defines optimism as ability to accept one’s present life conditions in a positive way rather than expecting positive future outcomes (Khoo, 1997; Lai & Yue, 2000). With this proposed difference in the process of conceptualizing optimism, it is reasonable to find Chinese have lower scores on LOT, which measures about the tendency to expect for the good. In other words, the common past findings that Chinese samples had lower level of optimism that measured by LOT only implies specifically their lower tendency to expect good future outcomes.

Besides the conceptual explanation, there were empirical findings that supported the possible impact of self-construal on optimism. It is indicated that greater individualism (Hofstede, 1984), egalitarianism (i.e. low power distance) (Schwartz, 1994) and mastery orientation (versus harmony) (Fischer & Chalmers, 2008), which were characteristics of independent self-construal, correlated with greater optimism.

On the basis of aforementioned belief (i.e. self-construal might shape concept of optimism) and related findings, it is suggested that a positive relationship exists between independent self-construal and optimism (hypothesis 2).

1.3. The Relationship between Self-construal and Subjective Well-being

The operational definition of subjective well-being, or happiness, is that satisfaction with life as a whole and a predominance of positive over negative affects (Diener, 1984). In different terms, Snyder and Lopez (2007) defined emotional well-being (i.e. happiness) as self-perceptions of happiness and satisfaction with life, and the balance of positive and negative affects. Using the operation definition above to various extent, there were several studies that concerned the relationship between happiness and nationality. Diener (1995) asserted that individualistic nations that are wealthier offer greater human rights, freedom and individualism, and have citizens with greater subjective well-being (SWB). Chang and Chang (2003) compared European and Korean participants on optimism and psychological adjustment and revealed greater life

satisfaction of the former group.

However, it was claimed to be inappropriate to apply a nation-level measure of individualism as there was risk to commit an “ecological fallacy” (Kim, Triandis, Kegitcibasi, Choi, & Yoon, 1994). In other words, though relationship did exist, it was unconvincing to say that nationality is a predictor of SWB as there are still many possible third variables, say wealth, national safety, living conditions and educational level in particular countries (sample from three different countries, four regions would be collected to further test this claim). Lu (2001) provided supporting findings by suggesting a better valuable of self-construal. With Taiwanese and British samples, Lu’s study on the mediation effect of coping strategies found self-construal is a more fundamental starting point, compared to nationality, to lead to happiness. In Lu’s Taiwanese sample, both independent and interdependent selves correlated to happiness (indexed by Chinese Happiness Inventory; Lu, 1996), with stronger relationship of independent self ($r = .3, p < .001$) compared to interdependent self ($r = .13, p < .01$). This is the third concern of this paper, to test whether the positive correlation between both self-construals and subjective well-being could be replicated in this study (hypothesis 3).

1.4. The Present Study: Putting Self-construal, Dispositional Optimism and Subjective Well-Being Together

Markus and Kitayama (1991) argued that the two self-construals could theoretically coexist within an individual-level. This was supported by Lu (2001)'s empirical study with British and Taiwanese samples. Though independent and interdependent self was dominant in British and Taiwanese respectively, two selves were found in both Lu's Taiwan & British samples. Similar phenomenon was found in Indian sample (Mishra, 1994). Lu then further suggested individual-level measure of culture may be more appropriate. With Lu's suggestion, and in the attempts to eliminate possible third variables, current study would specifically test whether self-construal is a more powerful predictor of optimism on an individual-level basis, with samples from three countries (four regions) within one single culture, which is collectivistic culture.

This paper proposed that self-construal might shape the conceptualization of optimism (thus affect the level of optimism measured by LOT-R) and in turn predicts subjective well-being in way that similar with psychological and physical well-being. Two constructs would be used to measure subjective well-being: life satisfaction and subjective happiness. Aforementioned literature review helped to come out with several hypotheses for this study. Specifically, (1) a high optimism associates with higher subjective happiness and life satisfaction; (2) a high independent self-construal associates with greater optimism and higher interdependent self-construal associates with lower optimism; (3) both high independent and interdependent self-construals

associate with greater subjective happiness and life satisfaction. There were some studies concerning the mediating role between different constructs on subjective well-being. Lai and Wong (1998) found coping behaviors not a significant mediator in the relationship between optimism and life satisfaction, among unemployed Hong Kong Chinese females. With urban adolescents as samples, Alder (2008) found optimism mediating the relationship between social support and life satisfaction. The former study suggested a direct effect of optimism in predicting life satisfaction while the later further indicated a possible mediating effect of optimism on life satisfaction. There is scarce empirical evidence to propose a relevant hypothesis, however, it would be an interesting question to be investigated whether optimism mediates the relationship between self-construal and happiness and life satisfaction.

Chapter 2: Methodology

2.1. Participants

A complete sample of 240 Chinese university students from Hong Kong, Mainland China, Malaysia and Taiwan were recruited in present study, with the majority coming from Hong Kong ($n=151$, 62.9%) and Malaysia ($n=49$, 20.4%), followed by Mainland ($n=16$, 6.7%) and Taiwan ($N=8$, 3.3%), and 16 unknown (6.7%). Most of the Hong Kong graduates were recruited in City University of Hong Kong (CityU). 177 of the complete sample had completed pen-and-paper questionnaire (73.8%) while 63 of them went with online questionnaire (26.3%). 90 among those with pen-and-paper questionnaires were convenient samples found across situations (e.g. dormitory and CityU campus) while another 87 were recruited in three different classrooms during the lecture breaks, generally one hour after the classes began. The class sizes were 50, 23, and 14, respectively. The mean age of the complete sample was 21.5 ($SD=.88$). There were 96 male, 141 female, and 3 with unknown gender in the sample. All participants were undergraduates across year 1 to year 4 (equivalent to grade 13 to 16 in the U.S), with the majority from year 3 (44.2%) and year 2 (27.1%). Parents of 211 (87.9%) participants are intact, while 27 of them (11.2%) have non-intact parental status, namely divorced, separated or bereaved parents. There were 83 (34.6%) of them from low income family, 53 (22.1%) and 25 (10.4%) were from mid-income family and high-income

family, respectively.

2.2. Materials.

Optimism The English version of the revised Life Orientation Test (LOT-R) (Scheier, Carver, & Bridges, 1994) was used to measure optimism, with Chinese translation for several words or phrases across the whole questionnaire. There were three positively worded items (e.g. ‘In uncertain times, I usually expect the best’) and three negatively worded items (‘e.g. I hardly ever expect things to go my way’), scoring on a 5-point Likert scale, range from with one (strongly disagree) to five (strongly agree). All the six items of the LOT-R (excluding filler items) were used except the second item (i.e. if something can go wrong for me, it will.), replaced by a new developed item (i.e. Looking into the future, I do not see any positive scenarios.) by Lai (2003) in his C-RLOT, claiming to reflect more precisely the non-positive-outcome-expectancy. In other words, this study used an English version of CLOT-R. After reverse-coding the three negatively worded items, all the six items were summed to produce an overall score. The scale with the new item, in Chinese version (i.e. CLOT-R), has showed acceptable internal consistency in past studies with Hong Kong Chinese youth (Lai & Cheng, 2004). The recent study, using the same scale, showed a Cronbach’s alpha of .75 with the sample of Hong Kong Chinese teenagers. These support the applicability of the scale among Chinese samples. This study showed

acceptable degree of Cronbach's alpha of .66 with the sample of Chinese undergraduates. The Cronbach's alpha would have increased to .71 if the first item in the scale (i.e. 'In uncertain time, I usually expect the best.') was deleted. However, the item remains for all further analyses for two reasons; first, the case may be due to the Chinese translation problem for the phrase 'uncertain times' (bu ke yu ce de shi hou) in the particular item, as the item showed no problem of internal consistency this long in past studies; secondly, the Cronbach's alpha would just have increased slightly (Δ Cronbach's alpha = .05).

Self-construal The Gudykunst et al. (1994)'s Self-Construal Scale (SCS) was used to measure the level of independent and interdependent self that proposed by Markus & Kitayama, (1991) on an individual level. This scale together with Singelis's (1994) and Leung and Kim's (1997) scales are the three most commonly used self-construal scales in psychological researches. In current study, all of the 29 items were used except the 28th item ('I help acquaintances, even if it is inconvenient.'). It was deleted due to the lack of face validity suggested by Gudykunst & Lee, 2003). Among those 28 items left, 14 items were worded to measure independent self and the other 14 items were worded to measure interdependent self, summing up respectively to produce an overall score for each self.

This scale have been used by many studies that claimed to be consistent with

Markus and Kitayama's (1991) conceptualization of self-construals, for instances, relational harmony (Chau, Cheung, Cheung, Li, & Wong, 1996), and strength of ethnic-cultural identity (Gudykunst, 2001). Convergent validity of the scale with other individual-level scales of individualism-collectivism (e.g. Gudykunst et al., 1994, 1996; Triandis & Gelfand, 1998) was supported too. The construct validity is claimed by Gudykunst (2003) to be consistently supported by many past studies too. In the scale with 29 items, Cronbach's alphas of the both self-construals ranging from .73 to .85 were found across four cultures (Gudykunst et al., 1996). This study, with the 28-item scale, showed Cronbach's alpha of .86 and .87, respectively for independent self and interdependent self.

The Satisfaction with Life Scale Life satisfaction was measured by the Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985) that measure global life satisfaction. This scales is consisted of 5 items (e.g. 'In most ways my life is close to my ideal') on a 7-point Likert scale ranging from one (strongly disagree) to seven (strongly agree). Scores were all summed up to produce an overall score. High internal consistency, a four-year temporal reliability and construct validity were found with the scale in studies with varying samples from different cultures (Diener et al., 1985; Diener & Suh, 1998; Magnus, Diener, Fujita, & Pavot, 1993). Cronbach's alpha of .84 was reported in current study with Chinese undergraduates.

Subjective Happiness Global Subjective happiness was assessed by Lyubomirsky and Lepper (1999)'s Subjective Happiness Scale (SHS) that consists of 4 items, with the 4th one is a reverse item. It is measured on a 7-point Likert scale. After reverse-coding the reverse item, all scores were summed to produce an overall score. The higher scores represent happier degree. Test-retest reliability and convergent validity were at the acceptable degree (Lyubomirsky and Lepper, 1999). In addition, high to excellent internal consistencies were reported with Cronbach's alpha ranging from .79 to .94 across large samples of varying ages, occupations, languages and cultures (Lyubomirsky and Lepper, 1999). Lyubomirsky (2006) reported Cronbach's alpha of .86 in a more recent study with sample of Caucasian retired employees. Cronbach's alpha of .77 was reported in current study.

2.3. Procedures

Variables were assessed by using self-report scales in the form of questionnaire, which is a method claimed to be appropriate especially in measuring internal experiences and subjective feelings (Diener, Suh, & Oishi, 1997). Each of the participants was asked to fill in a questionnaire on a voluntary and anonymous basis, which approximately took around 8-10 minutes to be completed. All scales were used in their English version as it is believed that the current sample of Chinese undergraduates have sufficient educational level and English proficiency to handle questionnaire in

English. The questionnaire consists of four scales, measuring self-construal, optimism, life satisfaction and subjective happiness, respectively. The last part of the questionnaire were six simple items asking for personal information, namely gender, age, current year of study, ethnic status, parental status and family total income (which is indicated in the questionnaire that only applicable to Hong Kong students). Soft-copies of questionnaire were sent to online samples (mostly non-Hong-Kong samples) through either email or Windows Live Messenger (formerly named MSN Messenger) together with briefing of current study and instructions. Printed questionnaires were administered to three different psychological classes in City University of Hong Kong after briefing and instructions in front of the class. Briefing and instructions were given repeatedly for each participant before completing the questionnaires for convenient samples across situations.

Chapter 3: Results

3.1. Preliminary Analyses

After running the descriptive analysis I found that there were too few participants ($n < 20$) among groups of two demographic variables, including parental status and family total income. Divorced, separated and bereaved parental status were then grouped into a “non-intact parental status”; while the eight groups of family total income (see appendix 1) were divided into “low income family (HK\$ 20,000 or below)”, “mid-income family (HK\$ 20,001 to HK\$ 40,000)” and “high income family (HK\$ 40,001 or above)”, to have sufficient number of participants in each group. Besides, for the demographic variable of ethnic status, participants who selected the groups of “westerners”, and “others” but without clarifying their ethnic were eliminated from the complete sample and would not be involved in any further analysis, as the Chinese samples were of interest in current study.

Independent sample T-test analysis was performed to test the effect of gender and parental status. Significant gender differences were found too on independent self, $t(228) = -2.22$, $p = .03$; optimism, $t(232) = -2.40$, $p = .02$; and life satisfaction, $t(234) = -2.25$, $p = .03$. Females showed greater independent self ($M = 73.70$, $SD = 9.23$), optimism ($M = 20.85$, $SD = 3.52$) and life satisfaction ($M = 22.31$, $SD = 5.18$), than their male counterparts, with the relative means of 70.60 ($SD = 11.92$), 19.71 ($SD = 3.62$) and

20.72 (SD = 5.56). Participants with non-intact parental status reported significantly greater independent self (M = 77.15, SD = 10.33) than those with intact parents (M = 71.90, SD = 10.40), $t(228) = -2.47$, $p = .01$. One-way Analysis of variance was run to test the effect of current year of study, ethnic status and family total income. None of the results were found significant. As there is no meaningful differences in concerned variables between sample groups from different regions, all the sample groups will be grouped together for further analyses. In order to control for the gender and parental status effect on concerning variables, gender and/or parental status was entered as the first step in all applicable further regression analyses.

The correlations among all variables were tested by running Correlation analysis. The correlation coefficients together with the number of participants, means and standard deviations were shown in Table 1. Significant positive correlations were significantly found between independent self, and interdependent self, optimism and life satisfaction, respectively. Particularly, independent self showed a mild positive correlation ($r = .51$, $p < .01$) with interdependent self. In addition, optimism was found positively correlated with both of the outcomes: life satisfaction and subjective happiness, with significant medium ($r = .44$, $p < .01$) and strong ($r = .54$, $p < .01$) correlation respectively. Finally, both outcomes, including life satisfaction and subjective happiness, correlated positively with each other, ($r = .58$, $p < .01$). Yet, the

correlation was not too strong, thus it could still be claimed that the two scales were validly designed to measure two different constructs of outcomes. According to the result of correlation analysis, only hypothesis-concerned-variables with significant correlations were further analyzed.

3.2. Hierarchical Multiple Regression Analyses

H1 indicated that a high optimism would associate with higher level of life satisfaction and subjective happiness. Gender (step 1) and optimism (step 2) was entered into hierarchical regression analyses, with life satisfaction and happiness as

Table 1

Correlations among All Variables

Variables	n	M	SD	1	2	3	4	5
1. independent self-construal	232	72.47	10.47	-	0.51**	0.17**	0.15*	0.12
2. interdependent self-construal	233	71.76	9.82		-	0.07	0.08	0.09
3. optimism	236	20.38	3.58			-	0.44**	0.54**
4. life satisfaction	239	21.73	5.41				-	0.58**
5. subjective happiness	239	18.90	4.09					-

Note. Both the independent self-construal and interdependent self-construal were measured by Self-Construal Scale (SCS; Gudykunst et al., 1994). The measure of optimism was the revised Life Orientation Test (LOT-R; Scheier, Carver, & Bridges, 1994). The life satisfaction and subjective happiness were measured by the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) and the Subjective Happiness Scale (SHS; Lyubomirsky and Lepper (1999).

* $p < .05$; ** $p < .01$

dependent variable separately. Both analyses revealed that optimism was a significant

predictor of life satisfaction, $F(2, 230) = 29.93$, $R^2 = .21$, $R^2 \text{ change} = .18$, $\text{Beta} = .43$,

$p < .001$; and subjective happiness $F(2, 230) = 47.31$, $R^2 = .29$, $R^2 \text{ change} = .28$,

Beta= .53, $p < .001$. The H1 was supported that optimism associates positively with both life satisfaction and subjective happiness.

H2 stated that independent self-construal associates positively with optimism while interdependent self-construal associates negatively. As what the previous correlation analysis suggested (see Table 1), only the potential predictive effect of independent self (but not interdependent self as it did not correlate with concerned variables) was tested. Gender and parental status (step 1) and independent self (step 2) were entered into hierarchical multiple regression analysis, with optimism as dependent variable. Significant predictive effect was found, $F(3, 221) = 4.29$, $R^2 = .06$, $R^2 \text{ change} = .02$, Beta= .15, $p < .05$. Hence, the results only partial supported H2 that independent self associates positively with optimism.

H3 indicated that both high independent and interdependent self associate with greater life satisfaction and subjective happiness. Similarly, with the reference of previous correlation analysis (see Table 1), only predictive effect of independent self on life satisfaction was tested by stepwise hierarchical multiple regression analysis. Gender and parental status (step 1) and independent self (step 2) were entered, and found no significant results. H3 was then not supported, that both self-construals do not associate with both life satisfaction and happiness.

Finally, it would be interesting to find out whether optimism would mediate the

relationship between self-construal and both life satisfaction and subjective happiness.

Since interdependent self did not correlate to optimism and both the two outcomes (i.e.

life satisfaction and subjective happiness), only the mediating effect of optimism

between independent self and the two outcomes was further tested, separately.

Following Baron and Kenny's (1986) criteria for testing mediation effect, first it is

required to have significant correlation between independent variable and the outcome;

secondly, the independent variable is significantly correlated with the mediator; thirdly,

there is significant association between mediator and outcome and fourthly, the

association between independent variable and the outcome is significantly reduced after

controlling the mediator. Test for H3 showed no significant associations between

independent self, and both of the two outcomes. However, Kenny, Kashy, and Bolger

(1998) doubted if it is necessary to fulfill the first criteria by Baron and Kenny (1986).

They claimed that most, although not all, researchers think that the first criterion is not

necessary as a path from the independent variable to the outcome is implied if second

and third criteria are met. While most recent researchers see the second and third, not

the first, criterion are the essential and necessary steps in mediation, the tests were

further run. Supported H2 showed significant correlation between independent self and

optimism; while supported H1 revealed significant association between optimism

between each outcome. Finally, two hierarchical multiple regression analyses were ran

Table 2

Hierarchical Multiple Regression and Sobel Test: Mediation Test

Step	Variables	R2	R2 change	Beta	Soble test (z)
Life satisfaction					
1	gender and parental status	0.02	0.02	0.15*/0.02	
2	independent self	0.04	0.01	0.12	
3	optimism	0.22	0.19***	0.44***	2.08*
Subjective happiness					
1	gender and parental status	0.01	0.01	0.12/-0.01	
2	independent self	0.02	0.01	0.10	
3	optimism	0.31	0.28***	0.55***	2.11*

Note. Sobel's test of indirect effects (z) was performed for each outcome.

* $p < .05$; *** $p < .001$.

(see Table 2) to test mediation. Gender and parental status (step 1), independent self

(step 2) and optimism (step 3) were entered, with the two outcomes as dependent

variable respectively, and found significant results for both outcomes. Two Sobel's tests

were then run to determine if the association between independent self and each

outcomes was significantly reduced. Results showed that the association between

independent self and life satisfaction and the one between independent self and

subjective happiness were reduced significantly, with $z = 2.08$, $p < .05$; $z = 2.11$, $p < .05$,

respectively. Hence, optimism was a mediator of the association between independent

self and each outcome, namely life satisfaction and subjective happiness (see Figure 1

and Figure 2). The results partially supported the concerned question in this study, that

optimism mediates only the association between independent self (but not

interdependent self) and both outcomes, respectively.

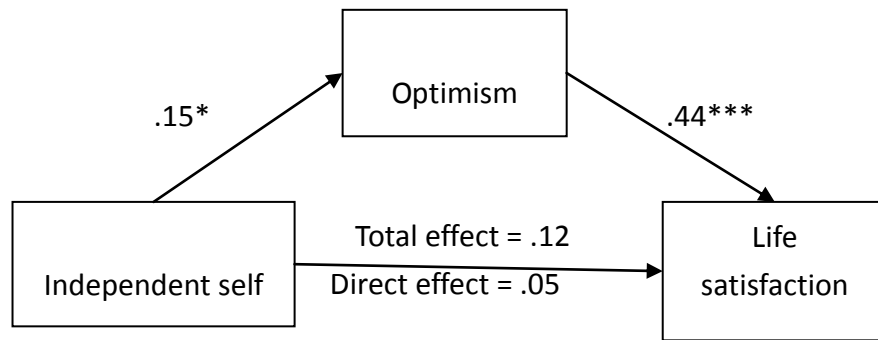


Figure 1. The mediation model with life satisfaction as dependent variable ($N = 224$).

Note. The coefficients in the figure are standardized.

* $p < .05$; *** $p < .001$.

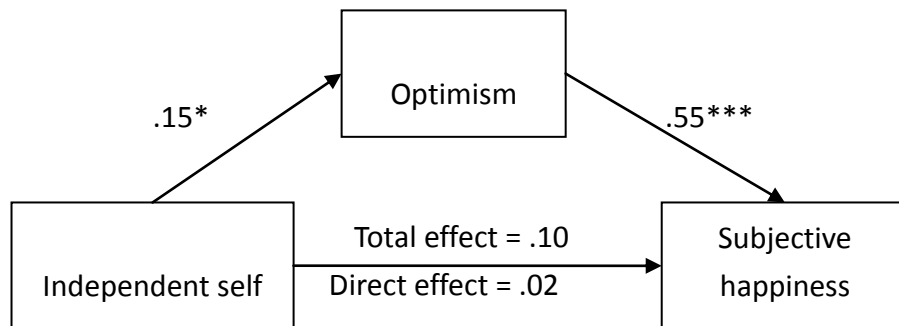


Figure 2. The mediation model with subjective happiness as dependent variable ($N = 224$).

Note. The coefficients in the figure are standardized.

* $p < .05$; *** $p < .001$.

Chapter 4: Discussion

4.1. Optimism and Subjective Well-being

In this study, optimism was found to be associated with life satisfaction and subjective well-being. People who are more optimistic, (i.e. holding positive expectancy toward future) are tended to be more satisfied toward their life as a whole and feel happier in general. The result on life satisfaction is consistent with most of the relevant past findings. In addition, besides the beneficial effect of optimism on life satisfaction among young, middle-aged (Isaacowitz, 2001) and older adults (Heo & Lee, 2010; Isaacowitz, 2001), urban adolescents (Alder 2008), college students (Harju & Bolen, 1998) and secondary school students (Wong, 2009), current study has generalized the similar effect among Hong Kong and Malaysian undergraduates, and the potential effect among undergraduates in Taiwan and Mainland China (due to the limited sample size). However, this result contradicts the one from Zhu (2003)'s study with both Eastern and Western university sample, that found only association between optimism, and psychological and physical well-being, but no such association with life satisfaction (indexed by a General Well-being scale that developed by the author for the particular study). This inconsistency may be due to the application of new scale (i.e. General Well-being Scale) in Zhu's study that measured life satisfaction with only a few selected items from relevant scale. We could then say that, with the use of commonly used scales

to measure dispositional optimism (all forms of LOT) and life satisfaction (e.g. SWLS), the predictive effect of optimism on life satisfaction is consistent across people from varying age groups and nations.

The Pearson correlation results showed moderate correlation ($r = .58, p < .01$) between life satisfaction and subjective happiness. In other words, people who feel satisfied with their life as a whole are more likely to feel happy, or the other way around. There is a Chinese idiom, 'Zhi Zu Chang Le' indicates the people who are able to feel satisfied with life are happier, suggesting that satisfaction leads to happiness. Regardless the causal relationship, the correlation found in current study, together with the fact that the words 'happiness' and 'subjective well-being' are interchangeably used in the literature and Snyder and Lopez (2007)'s definition of emotional well-being which involves self-perceptions of happiness and life satisfaction (together with balance of positive and negative affects leads to their full definition), suggest the subjective happiness is a noteworthy outcome to be studied in the field of 'Positive Psychology' (Seligman & Csikszentmihalyi, 2000). With only extremely scarce past empirical findings to be referred, current study revealed an even stronger predictive effect of optimism on subjective happiness, compared to life satisfaction ($\text{Beta} = .53, p < .001$; $\text{Beta} = .43, p < .001$). To try to put it in other words, more optimistic people tend to feel more cognitively satisfied with their life as a whole, and feel even emotionally happier.

The encouraging current findings, together with past relevant studies, expand the literature on effect of optimism from psychological and physical well-being to subjective well-being. This implies that in the face with stressor in daily life, optimistic people are not only able to function psychologically and physically better (e.g. Lai, 1998, 2005, 2009) but also adapt to the stressors cognitively and emotionally well.

4.2. Coexistence of Self-construal

Markus and Kitayama's (1991), and most empirical studies (e.g. Lu, 2001; Mishra, 1994) assumed that both self-construal could coexist within an individual level. What might be surprising is that, current sample reported almost the same level for both independent self and interdependent self ($M = 72.47$, $SD = 10.47$; $M = 71.76$, $SD = 9.82$), while the former is actually slightly stronger than the later in terms of mean. By trying to divide the mean scores respectively by the number of items, participant scored around the mean of 5.18 and 5.13 for each self, on a 7-point Likert scale with point of 4 is the neutral. This implies that the current sample from collective culture, which is believed to hold stronger interdependent self, has not only high level of interdependent self but also slightly higher level of independent self. This is in line with Zhu (2003)'s study that found similar level of independent self among eastern sample and western sample. There are some possible reasons for the equally high level of independent among current sample that consisted of mainly Hong Kong and Malaysian

undergraduates. Hong Kong is well-known as an international city in where both eastern and western cultures meet each other. There are chances for Hong Kong adolescents to be influenced by or learn from western culture that values stronger independent self. Among those Malaysian participants, most of them are studying their degree overseas; for those studying in Malaysia they are mostly away from home in the big cities (as many and main local universities in Malaysia are located in big cities). This is reasonable for them to be more independent to live alone. Finally, both Hong Kong and Malaysian participants are university students, who may value greater individualism, personal performance and capacity, and strive for equality and personal interest, which are all characteristics of independent self.

The two selves correlate with each other moderately ($r = .51$ $p < .01$), indicating that people with higher independent self are tended to have interdependent self too. Besides the coexistence of both selves in current sample, it is interesting to find out that both selves appear to coexist within an individual. This may be the case that individual holds actually two self as different self-schemas that guide his or her daily thoughts and behaviors in different occasions and settings. For an example, people may choose to go along with authoritarian figures' preference in family and company preference (with parents or boss as authority) but choose to stick with and voice out own idea while being with peers or friends in a school setting or a restaurant. Another example could be

given based on the eighth item ('I stick with my group even through difficulties') and the scale instruction ('.....groups can be referred to.....your family, friends or coworkers.'). One would usually stick with his or her family even through difficulties, but he or she may be less likely to stick with his or her coworkers in the same situation.

4.3. Self-construal and Optimism

While current sample held both high independent and interdependent self, the results showed that only independent self is associated with optimism, weakly (Beta = .15, $p < .05$). This revealed the small, but predictive effect of independent self on optimism. This may be because the independent self within an individual thinks that he or she is competent and superior as a unique person and thus is confident on meeting the future goals and desired outcomes; while the interdependent self within the same individual thinks that he or she have to depend on others in the future outcomes and thus has no absolute or no consistent own future expectation. This could be the underlying explanation, with the assumption of self-construal as the starting point of the small cultural difference on optimism suggested by literature, for the past findings that found western sample was more optimistic than eastern sample (e.g. Chang, 1996; Zhu, 2003). It is possible that Western people reported higher optimism level because they hold stronger independent self while eastern people hold weaker independent self, regardless the strength of interdependent self as it has no predictive power on optimism.

This study failed to provide any meaningful evidence to support, or not to support, the proposed explanation that Chinese culture defines optimism as tendency to accept one's current life conditions in a positive way rather than the positive expectation toward future outcomes (Khoo, 1997; Lai & Yue, 2000) and would thus have lower optimism. If it is assumed that the Chinese culture suggested above refers to a "typical" Chinese collective culture, current sample, which consisted of all Chinese, was not representative of the "typical" type of Chinese collective culture as each self is almost equally strong. This is because a collective culture should refer to stronger interdependent self, not just strong interdependent self or absolutely not stronger independent self in this case, while both interdependent and independent selves coexist. Thus, regarding to the current results, some may only come out with such a statement regarding "typical" collective culture and optimism with the focus on independent self, "People from culture in which independent self is weak would have lower optimism".

4.4. Self-construal and Subjective Well-being

Both self-construals were not associated with life satisfaction and subjective happiness. This contradicts past empirical findings on subjective well-being with the focus on western and eastern cultures (e.g. Chang and Chang, 2003), and the focus on self-construal (Lu, 2001). Lu found that both independent and interdependent selves correlated positively with happiness, with stronger correlation of independent self ($r = .3$,

$p < .001$) compared to interdependent self ($r = .13$, $p < .01$). This study found only significant but weak correlation between independent self and life satisfaction ($r = .15$, $p < .05$), however, the potential predictive power was not found after controlling the effects of gender and parental status (Beta = .12, ns). It is necessary to further control for gender and parental status as female undergraduates reported greater independent self and satisfaction than their male counterparts; while people have non-intact parents reported higher independent self than people having intact parents. Female, which is commonly believed to share most characteristics of interdependent self, did actually score higher in independent self in current study. However, it is no longer surprising when you find out that female participants in current study reported both higher independent and interdependent self. The possible reason suggested earlier for the result that both selves were correlated could be applied similarly here. When females were doing the questionnaire, they may be better than males in thinking of the relevant situations with different types of groups during which each self plays the main role respectively. Female claimed to be more satisfied with their life, and this is consistent with the findings of Beverly and Larry (1998) that female students reported more satisfied than male students. This may be because the fact that they tend to seek more supports from peers and significant others. Besides, it is reasonable to find out that people with non-intact parents were more independent, because they have to be. Both

the non-significant predictive power of independent on life satisfaction and the significant group differences of gender and parental status, imply that there are other factors that affect the expression of the effect of independent self on life satisfaction.

4.5. The Mediating Effect of Optimism between Independent Self and Subjective Well-being

Though there is no significant direct effect (see Figure 1 and Figure 2) of independent self on subjective well-being, both predictive power of independent self on optimism, and the association between optimism and subjective well-being, implied the link between independent self and subjective well-being, according to the mediation guidelines from Kenny, Kashy, and Bolger (1998). Optimism was then found to fully mediate the link. It is interesting to find no total effect of independent self on subjective well-being but the implied indirect effect, which might express through the path with optimism as a mediator. In the mediation models, independent self is associated with optimism, which in turn contributes to life satisfaction and subjective happiness, respectively. As discussed in earlier sections, it may be the case that people with stronger independent self would feel competent and superior and thus expect positive future outcomes, which in turn are more likely to feel satisfied with life and happy. This mediation model of optimism could provide a fuller picture of the underlying mechanism of indirect effect of independent self on subjective well-being to explain the

small but systematic pattern of culture differences in life satisfaction that found in past studies; and to provide an initial model to be tested and re-examined in further researches.

Chapter 5: Limitation and Conclusion

5.1. Limitation

One has to be careful to interpret the current findings as this study, like all the past studies, is not free of limitation. First of all, to my knowledge, there was only Lu's (2001) study in which the relationship between self-construal and subjective well-being was studied. Hence, the third hypotheses (H3) of this study, stating that self-construal would correlate positively with subjective well-being, was generated from, strictly speaking, only one past empirical study (see Lu, 2001). Some may argue that it is more reasonable to find no significant results for the H3 rather than significant one because there relevant past findings were way too limited. In addition, the mediation model was tested with the assumed causal relationship that independent self leads to optimism, which in turn contributes to subjective well-being. It is absolutely unethical to manipulate level of optimism on participants in lab, if any researcher is able to do so, after the well-documented beneficial effect of optimism on well-being. Besides, this study could not avoid the statistical error due to shared method variance. All variables were measured by form of questionnaire. Besides, the Chinese translations for certain phrases across the English version of questionnaire might affect the internal consistency of scales, especially the LOT-R in this case. The sample was consisted of all Chinese, who use the same fundamental language. Furthermore, their, past, and very recent

generations (e.g. their parents or grandparents) were Mainland Chinese, who value and taught to be optimistic living attitude and satisfaction with life across varying living conditions in order to be happy. Besides, the number of participants from different nation groups was not equal with very few participants from Mainland China and Taiwan. It is doubted that the results could be generalized to Chinese undergraduates from the both nations.

Further study with longitudinal design would be needed to test the direction of the predictive effect of variables across time before testing the mediation model. It may be interesting to study whether there is another mediator between optimism and subjective well-being to supplement the mediation path from independent self to subjective well-being. Financial status was claimed to be a full mediator between optimism and life satisfaction among sample of Hong Kong Chinese elderly (Harju & Bolen, 1998). However this study showed no significant financial effect. This can be possible that financial issue is much more concerned by elderly than adolescents as they are probably facing more health problems and living alone that require more medical and nursing expenses. The focus of future studies should be placed on other possible mediators, such as social interaction that claimed to have direct effect on happiness (see Lu, 2001). Including sample from varying Eastern countries, rather than just Chinese, would be appropriate to test if the effect pattern could be replicated in a more representative

Eastern culture on an individual basis. Future research will be important to recruit, more equally, participants from different nations to provide more valid data to test the generalizability of the results. Knowing that optimism has a beneficial effect on both psychological and subjective well-being, approaches or interventions to increase level of optimism should be developed and studied, if it is possible, to promote better mental health as a whole.

5.2 Conclusion

In sum, this study demonstrated the evidence that independent self, not interdependent self, predicts level of optimism, and in turn contributes to subjective well-being. Specifically, stronger independent self is associated with higher level of optimism, which in turn associates with life satisfaction and subjective happiness, respectively. These results has expanded the literature with the underlying mechanism of self-construal and subjective well-being with the mediation effect of optimism; and suggested subjective well-being, both life satisfaction and subjective happiness, are the essential outcomes to pay attention on in future research in the field of Positive Psychology regarding the benefits of strengths on mental health.

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City University of Hong Kong
Department of Applied Social Studies
Optimism and Happiness Questionnaire

Even 5 minutes will help a Psychology year 3 student's final year project studying optimism and happiness among university students. You are invited to participate in the study. All information provided will be kept in strict confidential and will only be used for research purposes. Please be honest and open in your responding.

Part A. Self Construal

Please answer the following questions on a 7-point Likert scale. (In some questions, groups can be referred to an organization that you are affiliated with, or your family, friends or coworkers.)

	1	2	3	4	5	6	7
	Strongly disagree		Neutral			Strongly agree	
1. I should be judged on my own merit (價值).	1	2	3	4	5	6	7
2. Being able to take care of myself is a primary concern for me.	1	2	3	4	5	6	7
3. My personal identity is important to me.	1	2	3	4	5	6	7
4. I consult others before making important decisions.	1	2	3	4	5	6	7
5. I consult with co-workers on work-related matters.	1	2	3	4	5	6	7
6. I prefer to be self-reliant (依靠自己) rather than depend on others.	1	2	3	4	5	6	7
7. I will sacrifice (犧牲) my self-interest for the benefit of my group.	1	2	3	4	5	6	7
8. I stick with my group even through difficulties.	1	2	3	4	5	6	7
9. I respect decisions made by my group.	1	2	3	4	5	6	7
10. I will stay in a group if it needs me, even if I am not happy with it.	1	2	3	4	5	6	7
11. I maintain harmony in the groups of which I am a member.	1	2	3	4	5	6	7
12. I respect the majority's wishes in groups of which I am a member.	1	2	3	4	5	6	7
13. I remain in the groups of which I am a member if they need me, even though I am dissatisfied with them.	1	2	3	4	5	6	7
14. I am a unique person separate from others.	1	2	3	4	5	6	7
15. If there is a conflict between my values and values of groups of which I am a member, I follow my values.	1	2	3	4	5	6	7
16. I try to <u>abide by customs</u> (遵守習俗) and conventions (慣例) at work.	1	2	3	4	5	6	7
17. I try not to depend on others.	1	2	3	4	5	6	7
18. I take responsibility for my own actions.	1	2	3	4	5	6	7
19. I give special consideration to others' personal situations so I can be efficient at work.	1	2	3	4	5	6	7
20. It is better to consult others and get their opinions before doing anything.	1	2	3	4	5	6	7

21. It is important to consult close friends and get their ideas before making a decision.	1	2	3	4	5	6	7
22. It is important for me to act as an independent person.	1	2	3	4	5	6	7
23. I should decide my future on my own.	1	2	3	4	5	6	7
24. What happens to me is <u>my own doing</u> (自己的所作所為).	1	2	3	4	5	6	7
25. My relationships with others are more important to me than my accomplishments (成就).	1	2	3	4	5	6	7
26. I enjoy being unique and different from others.	1	2	3	4	5	6	7
27. I am comfortable being <u>singled out</u> (挑選) for praise and rewards.	1	2	3	4	5	6	7
28. I don't support a group decision when it is wrong.	1	2	3	4	5	6	7

Part B. Life Orientation

Please indicate the extent of your agreement with each item using a **5-point** Likert scale ranging from “strongly disagree” to “strongly agree.”

Strongly disagree	1	2	3	4	5	Strongly agree
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1. In <u>uncertain times</u> (不可預測的時候), I usually expect the best.	1	2	3	4	5
2. Looking into the future, I do not see any positive scenarios.	1	2	3	4	5
3. I'm always optimistic about my future.	1	2	3	4	5
4. I hardly ever expect things to go my way.	1	2	3	4	5
5. I rarely count on good things happening to me.	1	2	3	4	5
6. Overall, I expect more good things to happen to me than bad.	1	2	3	4	5

Part C. The Satisfaction with Life Scale

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number in the line preceding that item.

1	2	3	4	5	6	7
Strongly disagree			Neutral			Strongly agree

1. In most ways my life is close to my ideal.	1	2	3	4	5	6	7
2. The conditions of my life are excellent.	1	2	3	4	5	6	7
3. I am satisfied with life.	1	2	3	4	5	6	7
4. So far I have gotten (獲得) the important things I want in life.	1	2	3	4	5	6	7
5. If I could live my life over, I would change almost nothing.	1	2	3	4	5	6	7

Part D. Subjective Happiness

For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

Not a very happy person 1 2 3 4 5 6 7 happy person

2. Compared to most of my peers, I consider myself:

Less more happy 1 2 3 4 5 6 7 happy

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?

Not at all 1 2 3 4 5 6 7 a great deal

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?

Not at all 1 2 3 4 5 6 7 a great deal

Part E. Personal Information (tick one in each following item)

1) Gender: 1. ☐ M 2. ☐ F 2) Age: _ 3) Current year of study: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ other : _____

4) Ethnic status: 1. ☐ Hong Kong Chinese 2. ☐ Mainland Chinese 3. ☐ Taiwan Chinese

4. ☐ Malaysian Chinese 5. ☐ Westerners : _____ 6. ☐ Others : _____

5) Parental status: 1. ☐ Intact (完整) 2. ☐ Divorced 3. ☐ Separated 4. ☐ Bereaved (喪亡)

6) Family total income (only applicable to Hong Kong people):

1. ☐ below HK\$ 10,000 2. ☐ HK\$ 10,001 - HK\$ 20,000 3. ☐ HK\$ 20,001 – HK\$ 30,000

4. ☐ HK\$ 30,001 – HK\$ 40,000 5. ☐ HK\$ 40,001- HK\$ 50,000 6. ☐ HK\$ 50,001 – HK\$ 60,000

7. ☐ HK\$ 60,001 – HK\$ 70,000 8. ☐ above HK\$ 70,001

THANK YOU FOR COMPLETING THE QUESTIONNAIRE