

# **Positive Psychology: The stress-buffering effect of positive psychological dispositions**

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## **Abstract**

The aim of this study was to investigate the effects of the daily hassles and resilience on tertiary students' well-being in Hong Kong. Relevant literature researches identified that resilience has been referred to as a constellation of personal resources. One of the most significant was the disposition of optimism. Additional suggestion shows that resilience has been referred to a person who can remain physically healthy even undergoing an experience high level of stress. Participants were 154 undergraduate Hong Kong students, in which each of them were asked to complete a cross-sectional survey. A tailored hassles scale for the students was used. Results of a multiple regression analyses indicated that hassles and resilience had a significant interaction in predicting a person's well-being level. Future studies could examine the more stable personality dispositions for a more appreciate measure of the personal well-being disposition.

## Introduction

During the course of the past decade, the topic of resilience has been receiving substantial amount of attention. Specifically, it explains the reason why some people adjust well when facing variety of adversities while some people do not. For instance, resilient people adapt better than vulnerable people do after initial encounter of stressful events. In speculation of the current Hong Kong societal climates, where college students serve a crucial role in future economic and societal arenas, students' exposure to the increasing universal phenomenon of hectic, busy way of lifestyle and academic life in the metropolitan cities had become inescapably obvious. To put this into a reality test, the goal of the present study was to examine the moderating effects of resilience on psychological well-being in Hong Kong Chinese.

Numerous literatures on stress and mental health suggested that individual differences in adaptation are closely associated with differences in coping efforts and societal resources (Shek & Mak, 1987). In occasion, they are referred to as protective factors that provide stress-buffering functions. Masten and Garmezy (1985) have divided protective factors into three categorizes: (1) self-esteem and a positive social orientation; (2) family cohesion; (3) the availability of an external support system that encourages and supports people's social skills. Until recently, researchers had also

found that personal resources, such as coping styles, mastery, and optimism exhibited stress-buffer effects and were associated with lower levels of both depressive symptoms and negative life events (Herman-stahl & Peterson, 1995). Meanwhile, dispositional optimism has emerged as the most important personality factor that moderates the relation between stress and psychological well-being (Chang, 1997; Lai, 1995; Lai & Chan, 2002; Lai & Wong, 1998).

Initial concept of resilience has been published from the findings of Cicchetti and Garnezy (1993) study. As some individuals seem to thrive on the challenges that adversity sets in motion. These children have been described as “invulnerable” or “invincible” but it is now more common known to them as resilient or stress-resistant (Masten & Garnezy, 1985). Certain protective factors, such as parenting, care and warmth may let the individual to do well in the face of risk factors. Individuals may develop coping skills to counteract risk and respond to challenges that eliminate the negative impact of risk, or even advance the individual to new levels of adaptation. (Cowan, Cowan and Schulz, 1996).

The lack of operationalised construct of resilience has been largely taken for granted in the modern psychological literatures. For example, resilient individuals have been conceived as those who experience a high level of stress but remain psychologically healthy (D’Imperio, Dubow, & Ippolito, 2000). Conversely, resilience

has also been referred to as a constellation of personal resources such as self-esteem, optimism and perceived control over stressful situations (Wanberg, 1997). Wanberg (1997) has shown that individuals high in these three factors are able to cope with the stress associated with unemployment more effectively than their peers who score low in the same three factors. This specific combination of personality factors that exhibit stress-buffering effects has been referred as personal resilience (Wanberg, 1997). Moreover, it has also been reported that optimism is one of the most crucial factors for discriminating between resilient and non-resilient high-school students in Hong Kong (Pang, 2001). With such study, there is preliminary support to the cross-cultural validity of the construct of resilience when it is conceived as personal resources conferring stress-buffering effects.

## Optimism

Optimism often resemble as a buffer against hopelessness. From a biological view point, some people are much more predisposed to pessimism and depression than others due to genetically derived aspects. Scholars like Seligman (1990) entailed a learning approach in explaining optimism as the result of having acquired a particular explanatory style. Meanwhile, Snyder et al. (1991) directed a more cognitive approach, conceptualizing optimism in terms of the self-concept that one

contains. In perspective of such, the definition of optimism is said to be vary among scholastic judgments. The definition offered by Scheier and Carver (1985), proposed that optimism is a generalized expectancy that good outcomes will generally occur when confronted with problems across. Generally speaking, optimism is used to denote a positive attitude or disposition that good things will happen independent of one's ability. Franken (1993) extended the definition of optimism into three separate components: biological, learned thinking style, and cognitive. Biological factor is the genetic disposition. Seligman (1990) has initiated the learning approach in which optimism grows out of people's explanatory style. According to this view, optimists are people who view setbacks, failures, adversity, and the sort as temporary, as specific to a given situation and due to external reasons or causes. Alternatively, cognitive component suggested by Snyder et al. (1991) refined that optimism contains a proactive component called planning. Snyder et al. (1991) conceptualized the relationship between agency and pathways as reciprocal. Alternatively, there is the self-belief that one can attain goals (agency) and conversely there is the belief that one can generate the alternatives (pathways) that are needed to achieve those goals. Without surprise, the concept of self-efficacy is integrated within the constructive network of optimism.

Aspinwall and Taylor (1992) have suggested that optimistic person tend to

adopt active problem-focused strategies during stressful encounters but pessimists prefer avoidance coping in similar situations. A longitudinal study among 373 university students demonstrated that self-efficacy and optimism were strongly related to performance and adjustment (Chemers; Hu & Garcia, 2001). Optimism is associated with active coping efforts, complexity or coping response, seeking social support, and it is inversely correlated with emotional expression and disengagement from goals (Sheier and Carver, 1985). Alternative empirical study by Lai and Wan (1996) found that when undergraduates cope with academic examinations, optimistic students were more inclined to use adaptive strategies subsumed under self-encouragement and less likely to use those pertaining to cognitive avoidance than their less optimistic peers.

For a decade, the focus on resilience has increasingly outnumbered the pathology in health tremendously (Ickovics & Park, 1998). The observed paradigm shift noted from Ickovics and Park (1998) solely emphasizing the change of direction on individual disease and illness toward a focus on enhanced health. Particularly, the explanation revealed as to why certain people adjust well when facing adversity while some people do not. People with greater resilience would turn up to have a better adaptation than vulnerable people do, subsequent to stressful event. The goal of present study was to examine the moderation effects of resilience on psychological

well-being in Hong Kong Chinese.

### Subjective well-being

Subjective well-being (SWB) is proposed to measure people's cognitive and affective evaluations of their lives. Diener (2000), defined subjective well-being as the quality of life is democratic in that it the voluntarily decisions of an individuals' right to weight whether their lives are worthwhile. Diener (2000), in the sense of scientific understanding, SWB is the cognitive and affective evaluation of one's subjective satisfaction. It operates when the people's experiences of the SWB to have contained many pleasant and few unpleasant emotions and when they engage in interesting, stimulating activities, when they encounter many pleasures and few pains, and when they are satisfied with the current lives they are engage in. Traditionally, researchers had been collecting different measurements, in hoping to have a more in-depth grasp of people's long time feelings (Diener, 2000). Both SWB and PANAS (Positive and Negative Affect Tool) had been subject to administration of the majority subject well being measure. Diener (2000) and has also brought the SWB to a standpoint for its validity. This was primarily showed by the level of discriminate validity of SWB has on other measures, such as optimism (Luscas, Diener, and Suh, 1996). Diener (2000), has suggested the most comprehensive way of measuring SWB is by allowing a

battery of diverse measurements to inter-perform with each other, hence, producing the most informative combination. A similar study in line with the general health well-being status by Sasaki and Yamasaki (2007) had investigated the relationships between dispositional and situational coping and health status in university freshman. Structural equation modelling was implicated to analyze the relationships between four coping strategies (i.e., emotion expression, emotional support seeking, cognitive reinterpretation, and problem solving) and four health status variables (i.e., somatic symptoms, anxiety and insomnia, social dysfunction and depression). Results indicated that increases in dispositional emotion-focused coping, such as emotion expression and emotional support seeking, predicted poorer health status. Additionally, increases in dispositional problem-focused coping, such as cognitive reinterpretation and problem solving, predicted better health status.

#### Cultural Pattern of Subjective Well-being

It is no surprise that wealthy nations may score higher in the SWB and tend to be happier, simply due to the likelihood of fulfilling basic human needs for food, shelter, and health, as well as better human rights records (Diener et al., 1995). Unexpected findings were found in Diener (2000) study, in which countries such as Brazil, Chile, and Argentina were unexpectedly high even the individual income was



controlled. Opposite trend was observed for Eastern European nations and Russia. These could perhaps be explained by the cultural differences observed and the political and economical differences appeared between those countries. Japan was observed to be an outlier; this could due to the highly regulated society and comprising strong conformity pressures and extremely high expectations.

The poorest nations in the survey; China, India and Nigeria did not show extremely low SWB responses that characterized earlier studies of the poorest societies. Perhaps this is because the levels of income are rising in these nations, and at the same time people there have lower expectations than in the West (Diener, 2000).

The study of Diener (2000) has intruded SWB can ultimately be influenced by cultural and societal factors. Several ways had been observed to influence SWB, such as the easy fulfillment of human's basic needs (i.e., food, clean water and health etc), and these industrialized nations verify the higher level of SWB. Secondly, cultural diversity in turn would alter the intimate relationship of SWB by influencing people's goals and values. At last, under the cultural variation, SWB appear to result from variations in optimism and positivity, social support, coping patterns, and the extent of regulation of individual desires (Diener, 2000). Similar study conducted by Li and Lin (2003), examined the impact of college stress on the psychological well-being of

Chinese undergraduate student (aged 17-22). The results show that college stress negatively affected psychological well-being as well as academic hassle being negatively affect psychological well-being, as did personal hassles and negative life events.

### Daily Hassles

Excluding the initial concept of life changes that provide an idea in regards to the impacts of significant life events, such as death, loss of job and marriage. On the other hand, there are some stressors taking place in daily life which can affect one's outlook on life and well-being. Such stressors have been termed "daily hassles", defined by the conspicuous daily nuisances and incidents which threaten or harm people's well-being (Lazarus, 1984). According to Lazarus, DeLongis, Folkman, and Gruen (1985), there are different types of hassles, such as household hassles (e.g., preparing meals, house management), health hassles (e.g., physical sickness or side-effects of medicine), time-pressure hassles (e.g., inadequate time, pre-occupation with too many obligations), inner-concern hassles (e.g., feelings of loneliness or anxieties), environmental hassles (e.g., pollution or political instability), financial responsibility hassles (e.g., concerns about debts), work hassles (e.g., job dissatisfaction or problems with colleagues), and future security hassles (e.g.,

concerns for job security, anticipation of retirement). Undeniably, cumulative experiences of such hassles would in turn induct tremendous pressure on one's life.

Daily hassle has been classified as the stressor that predicts negative physical and mental well-being. (De Longis et al.,1985). It was also found that apparent impact of hassles on well-being exceeds that of major life events (DeLongis et al., 1985; Holanhan & Holanhan, 1987). At the same time, the effect of major life events on well-being is mediated through daily hassles (Eckenrode, 1984; Kanner et al., 1981).

Nguyen, Unger, Hamilton and Spruijt-Metz (2006) completed a study on the associations among physical activity, stress, and hassles in a college population.

Females have shown to report more negative relationship between physical activity and hassles. Promotion of healthy programs for college students may benefit from incorporation of physical activity strategies to reduce stress. Another study by

MacGeorge, Samter and Gillihan (2005) had investigated the association between

academic stress and a variety of negative health outcomes such as; depression and

physical illness. In addition, the study has examined the capacity of supportive

communication reported as being received from friends and family to buffer the

association between academic stress and health. The results indicated a positive

association between academic stress and depression decreased as informational

support increased and emotional support was negatively associated with depression

across level of academic stress.

Studies of Hong Kong Chinese had adapted hassles to predict health of the youth. The findings showed that high level of hassles was related to dysphoria (Cheng & Lam, 1997), somatic symptoms (Lai, 1995) and poorer health and lower well-being on both short term measure like symptoms and mood as well as overall health status of adolescent (Wu & Lam, 1993). Findings also suggested that Chinese people are more internally perceived in locus of control as they seldom seek help from other people (Shek & Mak, 1987). Additionally, they tend to insist any potential assistance from the professionals (Cheung, 1984). Moreover, study from Shek & Tsang (1993) showed that those working parents with mentally handicapped children in Hong Kong are suffering from poorer psychological well-being and some even displayed a higher level of psychiatric symptom.

Yet, objectively perceived stressors are difficult to measure. Rather, it is the perceived stressor or the perception of the stressfulness of the stimuli, dominated the central interest of positive psychology. Moreover, by definition, stress is defined in terms of the amount of stress that perceived to be present or experienced by an individual. There are various research findings suggesting that perceived stress is a more powerful predictor of health status as oppose to objective stressors (e.g., Cohen & Wills, 1985; Lazarus & Folkman, 1984).

## Conceptualisation of Resilience

There are two major definitions of resilience. Firstly, the focus on the consequences or outcome of an individual while under stress is central to this definition. Two main elements are stress or risk as well as competence or well being. It relates to the processes that operate in the presence of risk to produce outcomes as good as or better than those obtained in the absence or risk. In this definition, resilient individuals are those who do not simply avoid the most negative outcomes associated with risk, but demonstrate adequacy or more than adequate adaptation on the face of adversity (Cowan, Cowan & Schulz, 1996). A number of researchers had conceptualized resilience by separating and identifying the resilient group by matching the stress and competence level. D'Impero's et al. (2000) classified stress affected students and resilient students by matching their life event level and competence level (antisocial behaviour, academic performance and school archival records). Follow by their protective factors and were compared between the groups. Dumont & Provost (1999) conducted similar classification by matching daily hassles and depression scores. Then four groups are produced as well adjusted, resilient and vulnerable. Group differences on self-esteem, social support, different strategies of coping, and different aspects of social life were examined. A similar research was also

conducted by Herman-Stahl & Peterson (1995), adolescents were divided into four groups based on indices of depression and negative life events (Resilient, negatively adjusted, vulnerable, positively adjusted). Group differences in coping style, mastery optimism and social resources were compared. Finally, study of Neighbors & Forehand (1993) differentiated the resilient adolescents by matching their level of familial conflict and competence. Their relationships with their mothers, levels of self-esteem were found.

Another concept describes the internal or external factors that a person processes when stress is being encountered. A person with internal factors such as, self-esteem, optimism and control are classified as resilient, vice versa. Smith & Carlson (1997) concluded that both ideas as “the presence of protective factors or process that moderate the relationship between stress and risk, with coping or competence on the other.” Comparisons between the resilient and non-resilient groups by their protective factors (e.g., level of stress and competence) were included.

Longitudinal study by Aspinwall and Taylor (1992), had adopted the cognitive adaptation theory. Evaluations of resilience determinants such as, optimism, psychological control and self-esteem among the college students, well-being, as well as physical health were being carried out. Similar research has been conducted by Major et al. (1998), to examine the effects of personality (self-esteem, control and

optimism) on post abortion adaptation (distress, well-being, and decision satisfaction).

The present study will solely exploring the role of the protective factors in affecting individuals' well being when put under stressful situations.

In the present study, optimism will be proposed to operationalise resilience; the moderating factors upon the effect of resilience are the relationship between daily hassles, physical well-being and psychological well-being. From the literature, a number of tools had been included to conceptualised well-being. These included computational scores of depressive symptoms (Dumont & Provost, 1998), physical and psychological illness (Sumi, 1997), mood disturbance (Anderson, 2001) In the current research, General Health Questionnaire (GHQ), Physical Health Questionnaire (PHQ), Asian Subjective Well-Being Scale (ASWB), Life Orientation Test (LOT) and Survey of Recent Life Experience (SRLE) will be performed jointly to measure personal well-being.

The objective of present study is to compare the well-being of the two groups of people under daily hassles namely resilient and vulnerable. Only optimism will be served as the personal protective factors to operationalise resilience. Individuals scoring high and low in optimism would be regarded as resilient and vulnerable, respectively. The focus of adolescents and college students has been a central theme in the line of positive psychology research, and this study will continue the

momentum in exploring the importance of the protective factor on the psychological well-being within the Asian context.

To shed the light, the present study is to explore the relationship between hassles and psychological health of the resilient and the vulnerable of the college students in Hong Kong. Understanding more about this relationship would perhaps alert the students' awareness towards the relationship between personal resources and their well-being and at the same time, give insight and proper allegations to the social welfare system to allow more training in this subsequent field of work in the near future. It was hypothesized that daily hassles (stress) has a negative relationship with well-being (health). Participants involved would have a positive predictive relationship between resilience (optimism) and well-being. There is a positive relationship between the moderating effect of resilience (both resilience and hassle) and the overall personal well-being (as presented in Figure 1).



## Method

### *Participants*

Participants for this study included 154 healthy undergraduate participants ranging from 19 years to 44 years old ( $M= 22.42$ ,  $SD= 3.70$ ). With 47 female students with an age range of 19 years to 33 years old ( $M=21.94$ ,  $SD=2.31$ ) and 107 male students with an age range of 19 years to 44 years old ( $M=22.64$ ,  $SD=4.16$ ).

### *Materials*

Each participant was administered the Survey of Recent Life Experiences (SRLE) (Kohn and Macdonald, 1992), the Physical Health Questionnaire (PHQ) (Schat, Kelloway & Desmarais, 2005), the General Health Questionnaire (GHQ) (Chan, 1985), the Life Oriented Test (LOT) (Lai & Yue, 2000) and the Asian subjective well-being scale (ASWB) (Chu & Chang, 2002). All the scales are presented in Appendix A.

The SRLE, consisted of 51 items, and is a scale that measures the need for decontaminated hassles for the general adults' population (a revised student version with 47 items was developed for the specificity for the present study of the Hong Kong population). The items were included into 12 subscales: mundane annoyances,

domestic responsibilities, work, romance, friends, family, other social relationships, finances, environment, time pressure, competitive standing (with reference to the persons' abilities, attractiveness), and future security. However, items mentioning physical or mental health clues were excluded from the scale. The participants were asked to respond on a 4-point

Likert scale, 1= *not at all part of my life*; 2= *only slightly part of my life*; 3= *distinctly part of my life*; 4= *very much part of my life*. According to Kohn and Macdonald (1992), the SRLE scale was found to have a satisfactory level of reliability at .92. However, Kohn and Macdonald (1992) have received analysis by an anonymous reviewer, suggesting a slight decrease in the reliability in the revised SRLE version (the 10 omitted items which fail to show any values on any factors in the SRLE) of .90. Moreover, intercorrelations between the pairs of factor-derived subscales had found a range from .26 to .50.

To measure somatic health symptoms, the Physical Health Questionnaire (PHQ) was developed (Schat, Kelloway & Desmarais 2005). A modified version of Spence et al. (1987) of the PHQ consisted of 14 items that are rated on a 7-point Likert scale, with 1= *Not at all*; 2= *Rarely*; 3= *Once in a while*; 4= *Some of the time*; 5= *Fairly Often*; 6= *Often*; 7= *All of the time*. It included 5 subscales: gastrointestinal

problems, headaches, sleep disturbance, respiratory infections and communalities.

The reliabilities for the subscales were about .80 (Schat, Kelloway & Desmarais, 2005). Items 1-11 were rated on a 7 point frequency scale, ranging from 1 (not at all) to 7 (all of the time). Items 12-14 had different frequency-related response data, we reverse coded all items but Item 4 (endorsement of this item indicated the absence of symptoms, whereas endorsement of all other items indicated the presence of symptoms) so that higher mean scores reflect better somatic health (Schat, Kelloway and Desmarais, 2005).

The General Health Questionnaire (GHQ) was initially developed by Goldberg (1972) to assess psychiatric disorders within communities, and it was one of the most commonly used measure of mental health in unemployment studies in western societies (Bartley, 1994). Due to the cultural nature of this study, the Chinese version has been used in the present study. This version of GHQ (Chan, 1985) has been consecutively validated among different population groups in Hong Kong, for example; adolescents (Shek, 1988), college students (Shek, 1992) and working adults (Shek, 1987). The participants were asked to indicate whether they had experienced each of the 30 symptoms or behaviours in the duration of last four weeks on a 4-point Likert scale (1= *less so than usual* to 4= *much more than usual*). Total scale scores were computed by adding ratings on the 30 items entirely. Higher scores imply greater

psychological impairment. Three factors were extracted from Shek (1992) study in Hong Kong. These were identified as anxiety, social dysfunction and depression and accounted for 24.7%, 9.5% and 5.1% of total variance, respectively.

The Life Orientation Test (LOT) was initially developed by Scheier and Carver (1985) for the purpose of dispositional optimism assessment. It assesses the level of positive outcome expectancies and to project the importance of health implications. In the year 1994, a revised version of the LOT with higher reliability and validity has emerged (Scheier & Carver, 1994). Lai, Cheung, Lee and Yu (1998) had examined and formed the utility of the revised Chinese life orientation test (LOT-R), comprised of 13 items specifically targeted among Hong Kong Chinese. The general results indicated the LOT-R as reliable and valid for administration. During the same year, C-LOTR was further examined by Lai and Wong (1998) and compressed the item numbers down to 10 and was administrated to a group of Hong Kong Chinese women. Additionally, Lai and Yue (2000) had further developed a 6 items C-LOTR to measure optimism among Hong Kong Chinese students. The alpha reliability level was demonstrated to be .61. The C-LOTR contained 6 items with a test response of a 5-point, Likert-type scale, (1= *Strongly Disagree*, *Disagree*, *Neutral*, *Agree* and *Strongly Agree*). It is comprised of 3 positively worded items (i.e., I am always optimistic about my future) and 3 negatively worded items (i.e., I hardly ever expect

things to go my way). Higher mean score implies higher level of optimism perceived.

The C-LOTR also demonstrated a moderately higher cronbach's alpha of .54.

The Asian Subjective Well-Being scale was developed by (Chu & Chang, 2002).

It is consisted of 14 items (with 12 items related to the one self and the remaining two

related to the family.). The participants were asked to respond on a 5-point Likert

scale, from 1= *Doesn't describe me at all* to 5= *Describe me very much*. Examples for

the self-related subscale include; "I am happy", "I have good health", "I am contented

with what I have" and "I am having a balanced life." For the family-related subscale,

it includes statements such as "My family members are healthy and have a sense of

well-being" and "I have my family support in the thing I want to do."

#### Procedure

Each participant was asked to complete the questionnaire. Participants were

asked to indicate the alternative that best described their own subjective opinions for

the entire questionnaire. In a relatively quiet environment, participants were asked to

provide their age, sex and educational level in the demographic page and

questionnaires were anonymous and were collected once it is completed (included as

Appendix B).

## Result

Data were analysed using the SPSS for windows statistical package version

14.0. Mean scores for all the predictor and criterion variables and their interaction are summarised in Table 1.

Table 1

*Means and Standard Deviations for all the Predictor and Criterion Variables and their Interaction*

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Variable	Mean Score	Standard Deviation
GHQ	58.83	11.24
PHQ	40.19	8.62
SRLE	109.37	17.43
LOT	14.06	4.06
ASWB (family-related)	5.31	1.98
ASWB (self-related)	31.50	9.59
Stress X Optimism	-23.52	73.70
N= 154		

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As indicated in Table 1, the mean physical health questionnaire score (PHQ) of the present study was 40.19 (SD= 8.614). The mean score for female was higher (M=42.64, SD=9.456) than that of male (M=39.11, SD=8.030). The mean general health questionnaire score (GHQ) was observed to be 58.83 (SD=11.237). The mean score of male (M=60.04, SD=11.574) was higher than the female counterpart (M=56.09, SD=10.010).

Alternatively, mean score of the Asian subjective well being score (ASWB) was 36.81 (SD= 10.805). Yet again, female scored higher (M=38.28, SD=11.868) than male (M=36.17, SD=10.387).

Furthermore, the mean scores and standard deviations of other predictors were illustrated as follow: Survey of recent life experience (SRLE) (M=36.81, SD=10.865), with female having a higher mean score (M=38.28, SD=11.868) than the male counterpart (M=36.17, SD=10.387). The mean score of life orientation test (LOT) was (M=12.84, SD=2.447) with male scoring a higher mean score (M=13.0, SD=2.674), and female (M=12.49, SD=1.804).

Pearson correlation coefficients with alpha =.01 (2-tailed) were computed to examine the correlations among each of the variables (including stress, optimism, well-being). The correlations between the pairs of variables are shown in Table 2 and Table 3 (including optimism, stress, PHQ and GHQ).

Table 2

*Intercorrelations Among Stress, Optimism and Well-being (self-family related)*

Variable	Stress	Optimism	Well-being (self-related)	Well-being (family-related)
Stress	1			
Optimism	-.334*	1		
Well-being (self-related)	.159*	-.334**	1	
Well-being (family-related)	.181*	-.236*	/	1

Note: N=154, \*  $p < .05$ ; \*\*  $p < .01$  (1-tailed)

Table 2 indicated that there is a significant negative correlation between the score of optimism and stress. That is, participants who score high in optimism (LOT) will have a lower score in stress (SRLE). Well-being (both self-related and family-related) was found to have a positive correlation with stress. Interestingly, well-being was found to have a negative correlation with optimism level.

Table 3



*Intercorrelation Among Optimism, Stress, PHQ and GHQ*

Variable	Optimism	Stress	PHQ	GHQ
Optimism	1			
Stress	-.334*	1		
PHQ	-.245*	.441*	1	
GHQ	.379*	-.371*	/	1

Note: N=154, \*  $p < .05$ ; \*\*  $p < .01$  (1-tailed)

According to Table 3, there a significant negative correlation between PHQ scores and optimism (LOT) score. That is, participants who score high in PHQ would have lower score in optimism. There is a positive correlation between PHQ and perceived stress level (SRLE). Additionally, there is a positive correlation between GHQ and Optimism. That is, the participants who score high in the GHQ will have a higher level of optimism. However, there is a significant negative correlation between GHQ and Stress (SRLE). The participants who score high in GHQ will tend to have a lower level of stress.

#### Multiple Regression Analysis

Multiple regression with force entry method was implicated to investigate the separate and unique contribution of standardised hassle (stress) score, resilience

(optimism) score and their interaction in predicting personal well-being scores.

Avoidance of double standardisation in which three unstandardised coefficients were obtained in numerical fashion; first (hassles), second (resilience) and third (interaction) predictors, the effect of a given predictor was controlled on the effects of all other predictors in the model. The analysis of the result is presented in Table 4.

Table 4

*Significant Predictor Variables in the GHQ Model*

Predictor Variable	Beta	<i>p</i>
Participants' Sex	-.152	<i>p</i> <.05
Participants' Age	-.018	<i>p</i> >.05
TotalSRLE	-.26	<i>p</i> <.05
TotalLOT	.31	<i>p</i> =.000
Stress x Optimism	.14	<i>p</i> >.05

(Participants' age was not a significant predictor on this model.)

Given the prediction of multiple variables (interaction of optimism and stress) were needed, multiple regression was computed to explore the linear relationships between the predictor and criterion variables. As for GHQ, the participants' scores in

it could be statically significantly predict by gender, with a substantial amount of

female showing lower score of GHQ, ( $F(3,153) = 9.61, p=.000$ , two-tailed)

Predictably, this variable could explain 14.4% ( $R^2=.161$ ) of the variability in the score of GHQ. The same methodology applies to investigate the total raw interaction of stress and optimism had on GHQ.

Using the enter method, a marginally significant model emerged ( $F(5,153) = 9.87, p=.000$ , two-tailed). Together, these variables could explain 22.5% ( $R^2= .25$ ) of the variability in the GHQ score. Participants' level of stress and optimism were both marginally significant predictors of the general health symptoms.

Significant variables in the PHQ model are shown in Table 5.

Table 5

*Significant Predictor Variables in the PHQ Model*

Predictor Variable	Beta	<i>p</i>
Participants' Sex	.18	$p<.05$
Participants' Age	.036	$p>.05$
TotalSRLE	.387	$p=.000$
TotalLOT	-.138	$p>.05$

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Stress x Optimism	-.17	$P < .05$
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(Participants' age and optimism were not considered as significant predictors on this model.)

In terms of the PHQ scale, participants' scores could be statistically significantly predict by the gender with ( $F(3, 153) = 14.62, p < .000$ , two-tailed). Foremost, this variable could explain 21.1% ( $R^2 = .226$ ) of the variability in score of the PHQ.

Additionally, variables had been included to investigate the total raw interaction of stress and optimism had on the score of PHQ. Participants' score in PHQ could be statistically significantly predict by the level of stress and optimism they perceive with ( $F(5, 153) = 10.54, p < .000$ , two-tailed). Together, these variables could explain 23.8% ( $R^2 = .262$ ) of the variability in PHQ score. Participants' level of stress and optimism were both significant predictors of the physical health symptoms.

Significant variables in the ASWB (family-related) are presented in Table 6.

Table 6

*Significant Predictor Variable in the ASWB (family-related) Model*

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Predictor Variable	Beta	$p$
Participants' Sex	.09	$p > .05$
Participants' Age	.14	$p > .05$

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TotalSRLE	.130	$p > .05$
TotalLOT	-.153	$p > .05$
Stress x Optimism	.172	$P < .05$

(Participants' sex and hassle level were not considered as significant predictors on this model).

In the ASWB (family related) score, participants' level of family related subjective well being could be statistically predict by the two interacting variables (stress and optimism), ( $F(5,153) = 4.06, p < .002$ , two-tailed). Together these variables could explain 9.1% ( $R^2 = .121$ ) of the variability in family related subjective well-being. In addition, the LOT was only marginally significant in predicting the level of family related ASWB and SRLE (stress) showed no significant relationship in predicting the level of family related ASWB.

Table 7 indicated the significant variables in the ASWB (self-related) model.

Table 7

*Significant Predictor Variables in the ASWB (self-related) Model*

Predictor Variable	Beta	$p$
Participants' Sex	.078	$p > .05$
Participants' Age	.047	$p > .05$

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TotalSRLE	.051	<i>p</i> >.05
TotalLOT	-3.825	<i>p</i> =.000
Stress x Optimism	.39	<i>p</i> >.05

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(Participants' Sex, age and stress were not considered as significant predictors in this model.)

As for the ASWB (self-related) scale, participants' level of self-related subjective well-being could not be statistically significantly predict by the two interacting variables (stress and optimism), ( $F(5,153) = 4.39, p < .001$ , two-tailed). Together these variables could explain 10% ( $R^2 = .129$ ) of the variability in self-related ASWB.

Furthermore, stress was not a good predictor of self-related ASWB, but optimism has shown to be a good predictor per se.

## Discussion

The aim of the current study was to examine the relationship between hassles and psychological health of the resilient and the vulnerable of the college students in Hong Kong.

The first hypothesis of the present study was to assess the level of predictability of hassles and individuals' well-being. As expected, the present study suggested a positive association between stress of minor events and health. This revealed a parallel trend with the findings of a previous study among 90 Hong Kong undergraduates (Lai, 1995), that daily hassles explained a significant portion of variance of physical symptoms score. On the other hand, this study supports Nguyen, Unger, Hamilton and Spruijt-Metz (2006) in which females do tend to explicit more stress and physical symptoms than males. This could be reflected by their natural gender inborn personality nature, of female being more expressive whenever circumstances had reach beyond the comfort zone. Additionally, the hypotheses has also supported with the study of MacGeorge, Samter and Gillihan (2005), where high level of academic stress would produce greater negative health outcome. Nonetheless, the current research further supports the relevance of hassles in predicting adaptation outcomes in an Asian cultural context.

The second hypothesis was to examine the extent of the personal resources predicting personal subjective well-being. Supporting the study's hypothesis, resilience was related to higher level optimism and better health. Comparatively, resilience was found to be a better predictor on optimism than well-being (health). It suggests that high self-evaluated and optimistic people are more likely to report pleasant feeling and in good physical situation. This study has supported with the parallel result of Sasaki and Yamasaki (2007), in which optimistic problem-focused coping would predict a higher level of optimism.

The final hypothesis was to illustrate the moderating effect of resilience (optimism) on the relationship between hassles (stress) and subjective well-being. Consistent to the result of Lai (1995), there was a moderating effect of resilience on the relationship between hassles and subjective well-being. However, this outcome was in contrary to the findings of Wanberg (1997) that no interaction effect was found between positive self-assessment and situational control on mental health. Nevertheless, these findings were entirely opposite to the non-significant outcome of the interaction of optimism and perceived stress in other researches (Sumi, 1997). Although, stress was found to have no association with the person's subjective well-being, this could perhaps be explained by the duration of stability of ones personality predisposition. Stress was perhaps being too brief and unstable when



exploring the relationship among the person's subjective well-being level. However, in the same study, a significant interaction was found among scores on optimism, social support and stress of those Japanese women's well-being. At the same time, the hypothesis has supported with Li and Lin (2003), where college stress has negatively correlated with psychological well-being.

Additionally, the function of personal resources may not be sufficient enough to determine person's resilience level. Indeed, many researchers (e.g., Lefcourn, Martin & Saleh, 1984) argued that social support is a function of a combination of personality traits, suggesting that a model which can identify at least three-ways interactions among social support, stress and personality traits is necessary. It implies that apart from internal factors, social support should be an important factor that determines one's well-being when facing stress.

The hypotheses in the current study were in-line with the expectation of the objective and past research findings. However, it is still fruitful to demonstrate that resilience contributes to psychological and physical health. At the same time, other related variables affecting the relationship between personal variables and personal well-being should not be overlooked. Aspinwall and Taylors (1992) had demonstrated that lower levels of self-esteem, perceived control and optimism predicted increase use of avoidant coping. Such coping style was associated with lower psychological

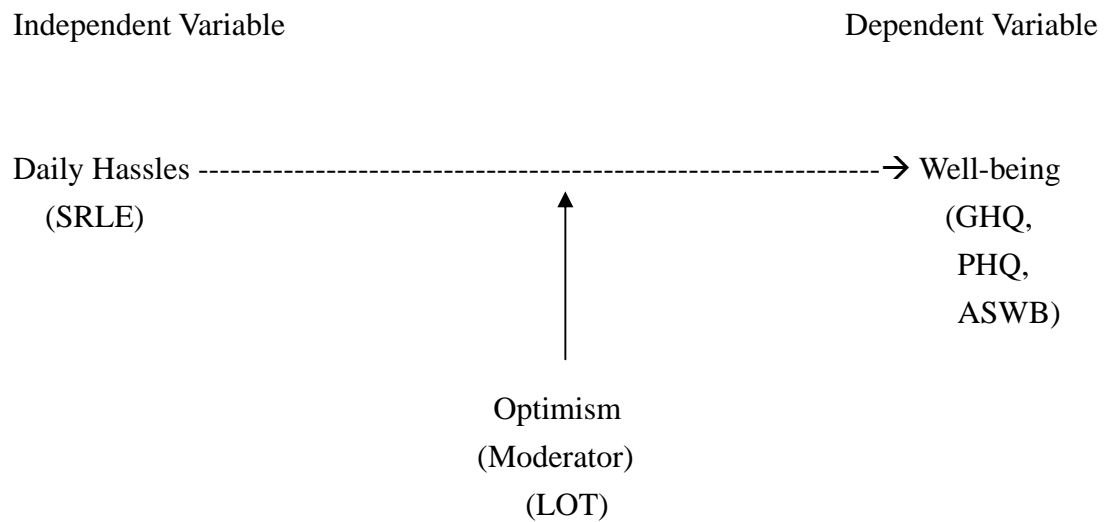
health. In turn, high perceived control and greater optimism predicted greater use of active coping, which in turn predicted higher psychological well-being (health). Subsequently, apart from the focus of social support, alternative method in exploring coping strategies would worth investigating in constructing resilience.

It needs to be pointed out that the mere generalisation of the findings bears some limitations. The classification of responses is affected by subjective interpretations and hence penetrating the substantial validity of the self-reported questionnaire. Additionally, the restricted understanding of the ideal concept of resilience were identified. In reference to prior researches, other more stable personality dispositions such as self-esteem, locus of control, perfectionism, humour (Fry,1995), independence (Flach,1988), and perceived control (Wanberg, 1997) were used to define resilience. However, considering the length of the questionnaire, too time-consuming questionnaire is unlikely to be completed in full. In order to balance the demand of practice of data collection and variable selection, only optimism was chosen to construct resilience. Therefore, further studies should put more light on the widen concept of resilience and even more external factors, such as social support and coping strategy, spiritual beliefs are worth discussing in the topic of resilience. In the mean time, under the hectic education climate and the current education reform circumstances in Hong Kong, the well-being of those students are deserved to put

extra attention and for the sake of the unique geographical ecology of the bicultural city.

Figure 1.

*The Overall Theoretical Framework of the Present Study*



*Note:* Moderator affects the relationship between hassles and well-being.