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CITY UNIVERSITY OF HONG KONG

The Effect of Resilience on Psychological Distress among University Students following Breakup

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

by

YAU Yue Chi, Isaac

August, 2013

Abstract

Resilience has been indicated as a protective factor across many at-risk populations. However, no study has addressed its impact in people after breakup, and proportionately fewer studies have explored the underlying mechanism of its impact. The present study, therefore, examined the association between resilience and psychological distress among university students who reported recent breakup and the mediation of this association by positive cognitions and coping styles.

A total of 121 university students completed the Connor-Davidson Resilience Scale, along with the Rosenberg Self-Esteem Scale, the View of World, the State Hope Scale, the Brief COPE, the Beck Depression Inventory – II and the Breakup Distress Scale.

Results indicated that after recent breakup, individuals who had higher level of resilience had higher self-esteem and used less maladaptive coping strategies, and reported significantly lower level of depression. Self-esteem and maladaptive coping fully mediated the association between resilience and depression. However, higher resilience score did not predicted lower scores in the Breakup Distress Scale.

This study provides further evidence that resilience, self-esteem and maladaptive coping might have significant impact on post-breakup psychological distress. Implication in research and school counseling service are noted.

Keywords: resilience, depression, breakup

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Thesis Submission Declaration Form

City University of Hong Kong
Department of Applied Social Studies

Thesis Submission Declaration Form

Student Name: Yau Yue Chi, Isaac

Student No.:

Title of Thesis/Dissertation: The effect of resilience on psychological distress among university students following breakup

Course Code: SS5790B

Programme: Master of Social Sciences in Applied Psychology

Supervisor's Name: Dr. Nancy YU

I have read and understood the following

- *Rules on Academic Honesty* (http://www.cityu.edu.hk/qac/academic_honesty/rules.htm)
- *Department's Statement on Plagiarism.*

Thesis/Dissertation Checklist (please tick):

☑ This paper is my own individual work.

☑ This paper has not been submitted to any other courses.

☑ All sources consulted have been acknowledged in the text and are listed in the reference list, with sufficient documentation to allow their accurate identification.

☑ All quotations are enclosed in quotation marks and that the source for each quotation has an accurate citation.

Signature: aac Yau **Date**: 2013-08-01

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Chapter 1: Introduction and Literature Review

Romantic relationship is typically developed during young adulthood. Erikson (1968), in his model of psychosocial development, proposed that young adult shift the focus from identity versus role confusion towards intimacy versus insolation. Young adulthood is the time to form an intimate relationship, meanwhile, is also the period of having tertiary education such as undergraduate degrees. Therefore, research about romantic relationship frequently target on university students. On the other hand, likelihood of experiencing relationship breakup increases in the same period of time. Breakup was described as one of the most upsetting experience and appears to be one source of significant life stress among university students. According to Monroe, Rohde, Seeley and Lewinsohn (1999), ending of key relationship such as death of a close person or breakup were both severe life events that might lead to first onset of major depressive disorder, but breakup was more common. Mearns (1991), similarly, also found that breakup could lead to clinical depression. However, high variability in psychological outcomes could be found among individuals in spite of the fact that they had been exposed to this life stressor.

1.1. Literature Review

Among several factors that contribute to the variability to the association between breakup and distress, characteristics of the past relationship were most frequently examined. Sprecher et al. (1998) found that individual's commitment to the past relationship and the duration of his/her past relationship significantly predicted current upset. In addition, they found that time since breakup when the questionnaire was completed was negative associated with current upset. In study by Knox, Zusman, Kaluzny and Cooper (2000), they also suggested that the longer the time since breakup, the less distress one would be. While Field, Diego, Pelaez, Deeds and Delgado (2009) and Simpson (1987) agreed that length of the past relationship predicted distress, their

results added that closeness of the relationship also associated with emotional distress. Furthermore, whether individual had found a new, desirable partner, or perceived it as easy were found negatively associated with breakup distress (Simpson, 1987). In short, higher commitment, higher closeness and longer length of past relationship predicted higher breakup distress, whereas longer time since breakup, higher perceived ease of finding new partner and finding a new partner predicted lower distress.

In addition to relationship characteristics, resilience might be a factor contributing to the variability in psychological outcome among individuals who experienced breakup. Resilience was usually referring to a process that endures individual's living and directs his/her adaptation in spite of adversity experiencing (Luthar, Cicchetti & Becker, 2000; Rutter, 2007). According to this definition, resilience could be expected to be protective for at-risk individuals from occurrence of psychological problems. Adaptive value of resilience for wide varieties of at-risk populations was demonstrated by different studies. For instance, resilience buffer negative effect of stressors among individuals suffering physical problems such as spinal cord injury (Catalano, Chan, Wilson, Chiu, & Muller, 2011) and infertility (Sexton, Byrd & von Kluge, 2010), individuals with history of child abuse or trauma exposure (Wingo et al., 2010), and individuals from stressful occupations such as nurses in intensive care unit (Mealer et al., 2012) and veterans (Pietrzak et al., 2010). The potential effect of resilience on emotional distress due to breakup, however, remained unknown. More interestingly, existing literature had demonstrated that resilient individuals had more positive thoughts (Mak, Ng and Wong, 2011) and used less maladaptive coping (Wilks, Little, Gough & Spurlock, 2011), whereas these characteristics were associated with less emotional problems after breakup. Therefore, resilience appeared to be a protective factor for university students who experienced recent breakup and this idea was tested in the present study.

Coping, as introduced by Lazarus and Folkman (1984, p. 141), was the "constantly changing cognitive and behavioral efforts" that individual executes in face of challenges or stress. Effective coping involved appropriate usage of both emotional-focused and problem-focused coping strategies since they aim at managing the distress from the problem and the problem itself respectively (Lazarus, 1993; Lazarus, 1984). Another five-factor model of coping developed by Zuckerman and Gagne (2003) consisted of three adaptive coping strategies (i.e. approach, accommodation and self-help) and two maladaptive coping strategies (i.e. avoidance and self-punishment). In Leung, Moore, Karnilowicz and Lung's (2011) study, maladaptive coping strategies were positively related to psychological distress while only approach coping among adaptive coping strategies was negatively related to distress. For individuals reported recent breakup, Birnbaum, Orr, Mikulincer and Florian (1997) found that maladaptive coping was associated with distress, whereas Sbarra and Ferrer (2006) suggested that rumination might lead to emotional problems. In short, maladaptive coping was a risk factor for occurrence of emotional problems after breakup. Given that resilient people were less likely to engage in maladaptive coping strategies, coping was proposed as a mediator between resilience and post-breakup distress.

Apart from coping, Lazarus and Folkman (1984) also suggested that it was the perceived stress or the stress appraisal influencing individual's emotional reactions, not the stress itself. Beck (1987), meanwhile, proposed a similar idea that cognitive appraisal would directly influence individual's emotions in his negative cognitive triad about depression. These two ideas both stressed the importance of cognitive aspect of a person within adversity and paved the road for studying roles of cognition on predicting the outcome of stressful life events. In respect to the hopelessness theory of depression, lack of self-worth and hope, and attributing stressors to stable and global factors were risk factors of depression (Abramson, Metalsky & Alloy, 1989). These negative

cognitions, with present of significant stressor, would lead to onset and reoccurrence of depression (Scher. Ingram & Segal, 2005). In Boelen and Reijntjes's (2009) research, all categories of negative cognitions (i.e. negative belief about the self, the world and the future, self-blaming, etc.) were associated with complicated grief due to breakup, whereas all but negative belief about life were associated with depression and anxiety. Provided that resilience was associated with positive cognitive styles and negative cognitive styles were associated with psychological distress after recent breakup, positive cognitions was proposed to mediate the impact of resilience on distress due to breakup.

1.2. Conceptual Frameworks and Hypotheses

With respect to the literature reviewed above, this study aimed to demonstrate the potential impact of resilience among people who experienced recent breakup. Although there was lack of existing evidence of the association between resilience and post-breakup distress, the effect of resilience had been shown across populations when facing different critical stressors. Therefore, it was argued that resilience would be a protective factor for university students' psychological well-beings after breakup (*Figure 1.*). Furthermore, based on the prior findings, resilience and post-breakup distress were both found to correlate with cognitive styles and coping styles. Despite these interrelationships were suggested by separate studies, they indicated a theoretical linkage between resilience and psychological distress after recent breakup. These pathways were particularly valuable when underlying mechanism of resilience was relatively underdeveloped. Thus, if resilience was found to be associated with emotional distress in students who reported recent breakup, it would be further argued that resilience impacted on these students through more positive thoughts and coping strategies (*Figure 2.*).

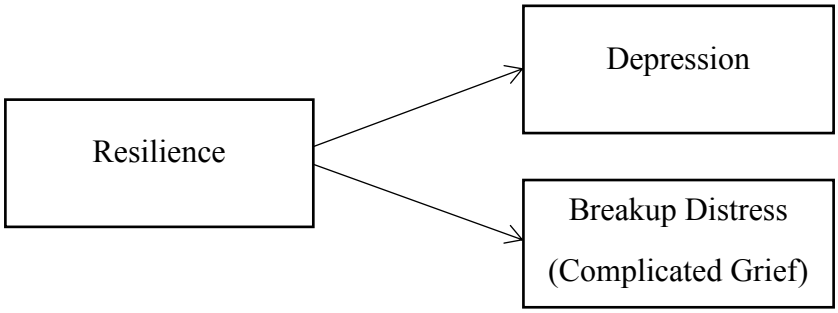


Figure 1. Conceptual framework for hypothesis 1.

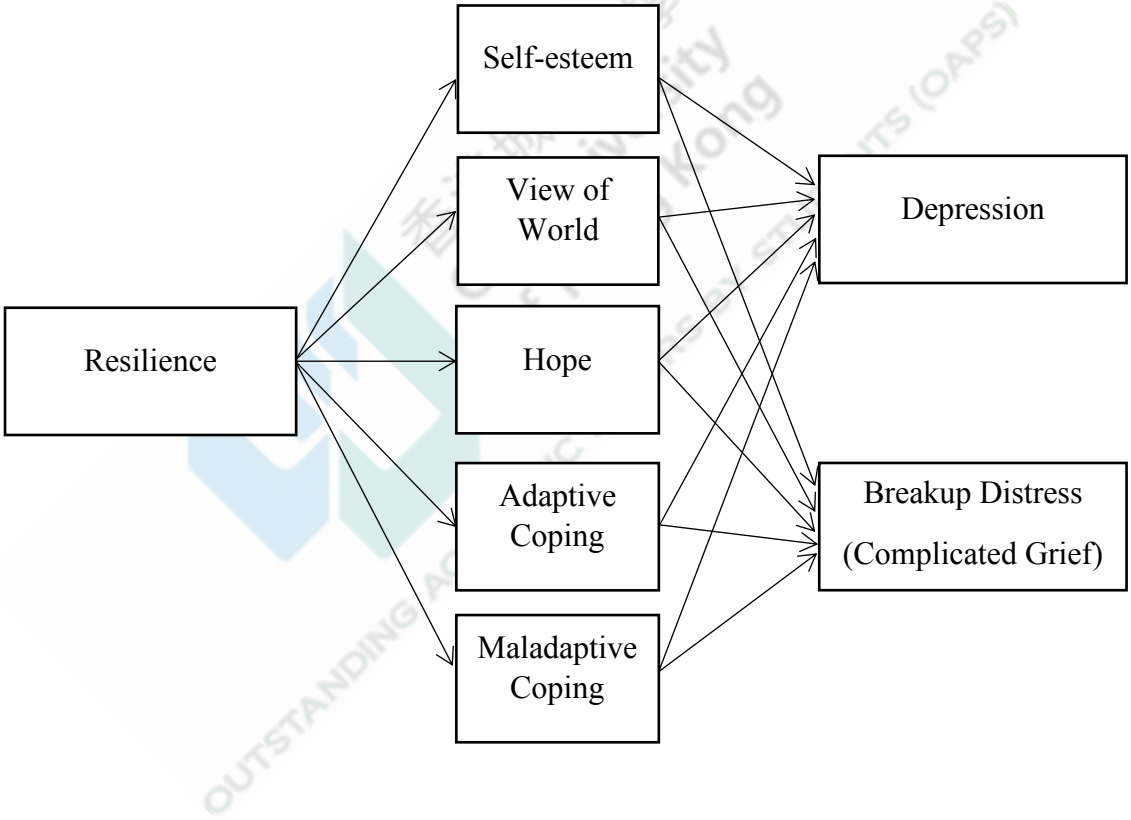


Figure 2. Conceptual framework for hypotheses 2 to 8.

In short, the key research question was whether resilience protected university students from post-breakup distress, whereas the second key research question was how the relationship between resilience and breakup distress, if any, was mediate by positive

cognitions and maladaptive coping styles. Based on these research questions, several hypotheses were formulated. It was hypothesized that (1) resilience is negatively correlated with breakup distress and depression (will be represented by "outcome variables" for simplicity); (2) resilience is positively correlated with self-esteem, positive world view and positive view of future (will be represented by "positive cognitions" for simplicity); (3) positive cognitions are negatively correlated with outcome variables; (4) resilience is positively correlated with usage of adaptive coping strategies; (5) resilience is negatively correlated with usage of maladaptive coping strategies; (6) use of adaptive coping strategies is negatively correlated with outcome variables; (7) use of maladaptive coping strategies is positively correlated with outcome variables; (8) the association between resilience and outcome variables is mediated by positive cognitions and coping style.

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Chapter 2: Methodology

2.1. Participants

A total of 121 Chinese participants took part in this study. All of them had experienced breakup within 12 months (M = 5.01, SD = 3.55). This ensured that the breakup was proximal and had significant impact on the participants. In addition, only participants aged within 18 to 30 years old (M = 23.19, SD = 2.37) were recruited so that they were similar in terms of Erikson's (1968) psychosocial development theory. All participants had been studying in or had completed tertiary education at the time of data collection. The participants consisted of 76 female and 45 male. 66 of them were single, 18 were in unrequited love, 33 were in new relationship and 4 did not specified.

2.2. Measures

All measure used was in Chinese. Since there was no existing Chinese version for Brief-COPE and Breakup Distress Scale, they were translated into Chinese and back-translated into English by two independent bilingual in Chinese and English. Discrepancies between original scale and its back-translated version were amended in the final questionnaire.

Demographic information. Participants were asked to provide their age, gender, education and recent relationship status.

Length of the relationship. The length of participants' last relationship was assessed by the item "How many months had you been dating with this person when the relationship ended?"

Time since breakup. The time since breakup was measured by the item "How many months from now had you ended the last romantic relationship?"

Commitment toward the relationship. Participants' commitment toward the last relationship was assessed by the question "Until the relationship ended, how committed were you to maintaining the relationship in the future?" They had to rate in a 7-point Likert scale, from 1 (not at all) to 7 (extremely). Higher scores indicated higher commitment.

Satisfaction index. 11 items were used to measure participants' satisfaction toward their dating partner in the last relationship. According to Simpson's (1987) operationalization, partner satisfaction could be assessed in terms of financial resources, physical attractiveness, emotional support, trustworthiness, similarity of values, kindness, similarity of interest, pleasantness of personality, social status, intimacy and sexual attractiveness. Participants rated how satisfied they were regarding the attributes on a 7-point Likert scale, from 1 (very unsatisfactory) to 7 (very satisfactory). All items were aggregated to form a single score, range from 11 to 77, in which higher scores indicated greater satisfaction. Internal consistency (Cronbach's alpha) in the present study was .89.

Perceived ease of finding alternative. Participants were asked to indicate their perceived ease of finding an alternative dating partner by item "I would have little trouble finding someone who could serve as an adequate replacement for my last dating partner." 7-point Likert scale, with 1 (I strongly disagree) to 7 (I strongly agree), was used. High score meant one had high perceived ease of finding alternative dating partner.

Breakup distress. By replacing the deceased person with the breakup person, the original Inventory of Complicated Grief was amended into the Breakup Distress Scale (Field, Diego, Pelaez, Deeds & Delgado, 2009). Meanwhile, 3 items were dropped due to its inappropriateness for relationship breakup. In another study done by Boelen and Reijntjes (2009), Inventory of Complicated Grief was revised in a similar way for assessing emotional problems among students experiencing breakup. Participants had to

indicate their choice on a 4-point Likert scale, from 1 (not at all) to 4 (very much so). Item scores were aggregated into total score in which higher score represent greater breakup distress. Since the operational definition of breakup distress closely resembled complicated grief, their criterion variables were similar as well. Criterion validity of this scale was supported by its association with Intrusive Thoughts Scale, the Sleep Disturbance Scale and Center for Epidemiologic Studies Depression Scale (Field et al., 2009). The internal consistency (Cronbach's alpha) was .93 in the present study.

Depression. Depression was measured by Chinese version of the 21-item Beck Depression Inventory – II (Beck, Brown & Steer, 1996). Regarding their situations in past two weeks, participants chose one option that best described themselves. The scores were aggregated into a total score with higher scores indicating more symptoms of depression. Study with Hong Kong Chinese adolescent had demonstrated its relationship with suicidal ideation and self-esteem for supporting its criterion validity (Sun, Hui & Watkins, 2006). Internal consistency (Cronbach's alpha) of the Beck Depression Inventory – II in the present study was .88.

Resilience. Chinese version of the Connor-Davidson Resilience Scale (Connor & Davidson, 2003) was used to measure resilience in participants. It consisted of 25 items and each of them was rated by 5-point Likert scale, ranged from 0 (not true at all) to 4 (true all the time). Scores were aggregated to one total score in which higher score indicated higher resilience. Yu and Zhang (2007) had demonstrated its criterion validity by its association with self-esteem and life-satisfaction. Internal consistency (Cronbach's alpha) of the Connor-Davidson Resilience Scale was .91 in the present study.

Self-esteem. Self-esteem, as an indicator of positive view of self, was measured by Chinese version of the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants had to rate 10 items on a 4-point Likert scale, ranged from 1 (not at all true) to 4

(exactly true). Higher aggregated score indicated higher self-esteem. Its criterion validity was demonstrated by its negative association with depression in Chinese (Yang, Zhang & Jiang, 2004). Farruggia, Chen, Greenberger, Dmitrieva and Macek (2004) suggested that Caucasian and Chinese scale-taker had different interpretation for item "I wish I could have more respect for myself". In the present study, its corrected item-total correlation was close to zero (r = -.01). Therefore, it was dropped from data analysis and the subsequent internal consistency (Cronbach's alpha) of Rosenberg Self-Esteem Scale in the present study was .87.

View of the world. Chinese version of 5-item View of World Scale, adapted from Cognitive Triad Inventory (Beckham, Leber, Watkins, Boyer & Cook, 1986) was used to measure positive view of world. The original View of World Scale has 10-item and was bi-dimensional (i.e. measuring both positive and negative world views). Mak, Ng and Wong (2011), however, suggested that reverse scoring of 5 negative items were not equivalent to scoring of positive items. Therefore, only positive items were retained in the present study. Participants were asked to rate on an 8-point Likert scale, ranged from 1 (definitely false) to 8 (definitely true). Scores were aggregated into a total score in which higher score indicating more positive view of world and society. Criterion validity was supported by its association with life satisfaction, self-esteem and depression (Beckhan et al., 1986; Mak et al., 2011). Its internal consistency (Cronbach's alpha) was .73 in present study.

Hope. Positive view of own future was assessed by Chinese version of State Hope Scale (Snyder et al., 1996). Participants rated items on an 8-point Likert scale from 1 (definitely false) to 8 (definitely true). Scores from 6 items were aggregated to a score, with higher score indicating greater hope towards future. Snyder et al. (1996) had demonstrated construct validity of State Hope Scale by its association with dispositional hope. In the same study, criterion validity was supported by its relationships with state

self-esteem, positive and negative affect. Consistent with Mak, Ng and Wong's (2011) study, item 1 had close-to-zero corrected item-total correlation (r = -.02) and was dropped in data analysis. Subsequent internal consistency (Cronbach's alpha) was .84 in the present study.

Coping style. Chinese version of the Brief COPE (Carver, 1997) was administered to measure participants coping styles. This scale consisted of 28 items assessing 14 types of coping, including self-distraction, denial, substance use, venting, behavioral disengagement, self-blame, active coping, planning, positive reframing, acceptance, seeking emotional support, seeking instrumental support, humor and religion. Participants had to rate each item on a 4-point Likert scale, from 0 (I haven't been doing this at all) to 3 (I've been doing this a lot). Use of each strategy would be indicated by the aggregated score from two items, with higher scores indicating greater usage. According to Meyer (2001), items in Brief COPE could be grouped into adaptive and maladaptive coping with regarding to research purpose. In the present study, scores on active coping, planning, positive reframing, acceptance, seeking emotional support, and seeking instrumental support were aggregated into one score indicating adaptive coping, while scores on self-distraction, denial, substance use, venting, behavioral disengagement, and self-blame were aggregated into one score indicating maladaptive coping. Criterion validity of the Brief COPE was supported by its association with self-esteem, perceived stress and emotional distress in French population (Muller & Spitz, 2003). Internal consistencies (Cronbach's alpha) of all coping strategies were greater than .50 except active coping (.44) and acceptance (.43) in the present study.

2.3. Procedure

Potential participants were approached by the researcher and were presented with the detail description of the study, including its purpose and coverage of data collection.

24 of them were eligible to participate, while 198 of them were ineligible but agreed to help by referral. After the invited or referred participants had indicated their informed consent, they completed the questionnaire either presented by the researcher or the referees. In total, 222 completed questionnaires were returned. However, 101 referred participants did not fulfill the selection criteria and their data were excluded in data analysis. The study was approved by the Research Ethics Sub-committee of the College of Liberal Arts and Social Sciences in City University of Hong Kong.

2.4. Data Analysis

Normality was assessed by histograms and skewness values. Scores in Beck Depression Inventory – II was found non-normally distributed and was transformed by square root transformation. Descriptive statistics, Pearson correlation and Linear Regression analyses were conducted between all study variables. Given that the basic criteria for mediation to occur were fulfilled, hierarchical regression analysis was conducted to test the hypotheses that positive cognitions and coping styles mediate the relationship between resilience and depression. In model 1, demographic characteristics, relationship characteristics and breakup distress were entered as predictor of depression. Resilience was then entered as an additional predictor of depression in model 2. For the final model, self-esteem, view of world, hope, adaptive coping and maladaptive coping were included as extra predictor of depression. Potential mediators could be detected if predictive power of resilience was significantly reduced in model 3. If resilience was significantly associated with breakup distress, similar analysis would be done. All statistical analyses were conducted using the Statistical Package for Social Sciences (SPSS) version 20.0.

Chapter 3: Results

3.1. Descriptive Statistics

The demographic data of participants and characteristics of their last relationship were shown in Table 1. The average length of their last relationship was nearly twenty-two months (M = 21.91, SD = 20.89) while the average time since break up was five months (M = 5.01, SD = 3.55). In general, the participants were moderately committed toward their last relationship when it was intact (M = 5.35, SD = 1.59), and were fairly satisfied with the last person they were dating with (M = 51.60, SD = 11.84). Their perceived ease of finding a new partner who would adequately replace the last partner was just above neutral (M = 3.65, SD = 1.69).

Table 1.
Demographic and Relationship Characteristics of Sample (N = 121)

	M ± *SD* *n (%)*
Age	23.19 ± 2.37
Gender	
Men	45 (37.2%)
Women	76 (62.8%)
Recent Relationship Status	
Single	66 (54.5%)
In unrequited love	18 (14.9%)
In a relationship	33 (27.3%)
No reply	4 (3.3%)
Length of Relationship [a]	21.91 ± 20.89
Time since Breakup [a]	5.01 ± 3.55
Commitment toward the relationship [b]	5.35 ± 1.59
Partner Satisfaction [c]	51.60 ± 11.84
Perceived Ease of Finding Alternative [b]	3.65 ± 1.69

[a] Measured in months.
[b] The scores ranged from 1 to 7.
[c] The score ranged from 11 to 77.

3.2. Relationship between Study Variables

The Pearson correlation for variables involved in the present study was shown in Table 2. Not all hypothesized relationships between the variables were observed. First, resilience was negatively correlated with depression (r = -.31, p <.01) but breakup

Table 2.

Pearson Correlations of Study Variables (N = 121)

Variable	Breakup Distress	Depression	Resilience	Self-esteem	View of World	Hope	Adaptive Coping	Maladaptive Coping
Breakup Distress	-	.53**	-.14	-.19*	-.23*	-.24*	-.04	.48**
Depression		-	-.31**	-.40**	-.20*	-.38**	-.09	.59**
Resilience			-	.57**	.43**	.56**	.45**	-.26**
Self-esteem				-	.32**	.43**	.51**	-.34**
View of World					-	.33**	.42**	-.03
Hope						-	.33**	-.17
Adaptive Coping							-	.05
Maladaptive Coping								-

Note. Adaptive Coping is the aggregated score of active coping, planning, positive reframing, acceptance, seeking emotional support, and seeking instrumental support in Brief COPE. Maladaptive Coping is the aggregated scores of self-distraction, denial, substance use, venting, behavioral disengagement, and self-blame in Brief COPE.

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

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distress (r = -.14, p > .05). Second, resilience was positively correlated with self-esteem (r = .57, p < .01), view of world (r = .43, p < .01) and hope (r = .56, p < .01). Third, self-esteem, view of world and hope were negatively correlated with both breakup distress (r = -.19 to -.24, ps < .05) and depression (r = -.20 to -.40, ps < .05). Furthermore, resilience was positively correlated with adaptive coping (r = .45, p < .01) and negatively correlated with maladaptive coping (r = -.26, p < .01). Finally, maladaptive coping was positively correlated with breakup distress (r = .48, p < .01) and depression (r = .59, p < .01). In short, the result provided partial support for the hypothesized interrelationships between these variables.

3.3. Testing for Mediation Model

Since there is no significant correlation between resilience and breakup distress, only the hypothesized mediation between resilience and depression was analyzed. Given that resilience was significantly associated with depression and potential mediators (i.e. self-esteem, view of world, hope, adaptive coping and maladaptive coping) whereas these potential mediators, except adaptive coping, were significantly associated with depression, the basic criteria for mediation testing were met. According to Baron and Kenny (1986), predictive power of a predictor should be reduced when the mediator was controlled in the equation. Therefore, hierarchical regression analysis was conducted to identify the potential mediators in relationships between the resilience and depression. Standardized regression coefficient (β), F-value and Adjusted R^2 for the model were shown in Table 3.

In Model 1, participants' gender, age, recent relationship status, relationship characteristics and breakup distress were forced into the equation, R = .61, F (9, 74) = 4.88, p <.001. Relationship characteristics were included in Model 1 because prior studies had demonstrated their association with emotional distress due to breaking up

(Field, Diego, Pelaez, Deeds & Delegado, 2009; Knox, Zusman, Kaluzny & Cooper, 2000; Simpson, 1987; Sprecher et al., 1998). For the controlled variables, model 1 showed that length of the last relationship and ease of finding alternative dating partner was negatively associated with depression. Regarding variable of interest, model 1 showed that breakup distress (β = .41, p < .001) was positively associated with depression. Thirty per cent of variance in depression was accounted for by these predictors.

In Model 2, resilience was included in the equation, R = .66, F (10, 73) =5.57, p <.001. Length of relationship was still significantly associated with depression while the effect of ease of finding alternative reduced and became insignificant. Regarding study variables, model 2 revealed that resilience (β = -.26, p = .01) was negatively associated with depression, whereas breakup distress (β = .44, p < .001) remained negatively associated with depression. Additional six per cent of variance in depression was accounted for by introducing resilience into the model and resulting thirty-six per cent explained variance.

In Model 3, self-esteem, view of world, hope, adaptive coping and maladaptive coping were included into the equation for mediation testing, R = .77, F (15, 68) = 6.40, p <.001. Consistent with previous model, length of relationship remained negatively associated with depression. Similarly, breakup distress (β = .30, p = .01) was also negatively associated with depression. Model 3 showed that self-esteem (β = -.26, p = .04) was negatively associated with depression whereas maladaptive coping (β = .29, p = .01) was positively associated with depression. In particular, the effect of resilience (β = -.05, p = .67) previously discussed in Model 2 was significantly reduced and became insignificant in the final model, thus indicating that self-esteem and maladaptive coping fully mediated the relationship between resilience and depression. Besides, positive view of world, hope and adaptive coping did not approach significant in the

regression model. Overall, forty-nine per cent of variance in depression was accounted for by these predictors, with thirteen per cent increase from Model 2.

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Table 3.

Hierarchical Regression Analysis for Variables Predicting Depression

		β	*p*	*F*	Adj. R^2
Model 1			<.001	4.88	.30
	Gender	-.12	.24		
	Age	.08	.40		
	Recent relationship status	-.04	.65		
	Length of relationship	-.21	.03		
	Time since breakup	-.14	.17		
	Commitment	.02	.86		
	Partner satisfaction	-.00	.98		
	Ease of finding alternative	-.22	.04		
	Breakup distress	.41	<.001		
Model 2			<.001	5.57	.36
	Gender	-.12	.22		
	Age	.09	.37		
	Recent relationship status	-.04	.67		
	Length of relationship	-.19	.04		
	Time since breakup	-.08	.40		
	Commitment	.01	.91		
	Partner satisfaction	-.01	.95		
	Ease of finding alternative	-.16	.11		
	Breakup distress	..44	<.001		
	Resilience	-.26	.01		
Model 3			<.001	6.40	.49
	Gender	-.11	.21		
	Age	.10	.27		
	Recent relationship status	-.04	.66		
	Length of relationship	-.22	.01		
	Time since breakup	-.01	.92		
	Commitment	.02	.79		
	Partner satisfaction	.03	.72		
	Ease of finding alternative	-.17	.09		
	Breakup distress	.30	.01		
	Resilience	-.05	.67		
	Self-esteem	-.26	.04		
	View of world	.10	.28		
	Hope	-.04	.73		
	Adaptive coping	-.07	.54		
	Maladaptive coping	.29	.01		

Note. *β*= standardized regression coefficient. Adj. R^2 = adjusted R square.

Chapter 4: Discussion and Conclusion

4.1. General Discussion

The main purpose of the present study was to examine the effect of resilience among university students after breakup. The findings showed that resilience was a significant protective factor for depression, with higher resilience associated with lower level of depression, for people experienced recent breakup. This was consistent with prior literature showing resilience as a protective factor against occurrence of depression in at-risk individuals, such as those suffering spinal cord injury (Catalano, Chan, Wilson, Chiu, & Muller, 2011), those with history of child abuse or trauma exposure (Wingo et al., 2010), and those served in stressful occupations like intensive care unit nurse (Mealer et al., 2012) and veterans (Pietrzak et al., 2010). Therefore, it appeared that resilience had enabled people to live through the hard time after romantic relationship dissolution and to not becoming depressed. However, it appeared that resilience did not protect individuals from chronic grief after breakup. It was unexpected that association between resilience and breakup distress did not approach significant. In respect of existing literatures, regardless complicated grief due to relationship dissolution or death of others, effect of resilience was rarely, if not never, addressed. Nonetheless, well adjustment and absent of chronic grief were prevalent in the population which experienced loss. A longitudinal study, done by Bonanno et al. (2002), suggested that grief response to death of spouse was associated with dependency on spouse and acceptance of the death. In the same study, they also indicated that no clear link was found neither between grief and dysfunctional world view nor between grief and coping resources. From the three factor structure of resilience suggested by Yu and Zhang (2007), it appeared that Chinese resilient individuals had high self-efficacy to cope, were able to set goal and to seek growth from adversity. While the factors of grief response, suggested either by Bonanno et al. (2002)

or Denckla, Mancini, Bornstein and Bonanno (2011), were rooted in interpersonal factors, resilience, however, was relatively personal. In other words, characteristics of resilient individuals might not be relevant and helpful to protect them against chronic grief after loss or relationship breakup.

The second aim of this study was to examine the underlying mechanism of how resilience reduced emotional problems in at-risk university students. The results showed that the relationship between resilience and depression was mediated by positive view of the self. This finding provided partial support for the original hypotheses of the present study. Although mediating effect of self-esteem between resilience and depression was only demonstrated in Mak, Ng and Wong's (2011) study, its respective associations with resilience and depression were well-documented in prior research. Trait resilience had been found to positively associate with self-esteem (Benetti & Kambouropoulos, 2006), whereas the idea that low self-esteem contributed to high rate of depression was consistently supported by meta-analysis across 77 longitudinal studies (Sowislo & Orth, 2013). Regarding emotional distress due to breakup, Boelen and Reijntjes (2009) also suggested that positive belief about oneself was the key factor fostering recovery. Resilient individuals had positive sense of self and were able to sustain it even in difficult time due to breakup, thus they were less prone to depression. In addition to self-esteem, maladaptive coping was another significant mediator in the relationship between resilience and depression. This was consistent with previous findings showing that maladaptive coping was positively associated with depression in sample that experienced breakup (Birnbaum, Orr, Mikulincer & Florian, 1997; Leung, Moore, Karnilowicz & Lung, 2011; Sbarra and Ferrer, 2006) or other trauma (Ng & Hurry, 2011; Vickers et al., 2003; Zuckerman & Gagne, 2003). It also supported the idea that resilience was negatively correlated with maladaptive coping (Wilks, Little, Gough & Spurlock, 2011). Resilient individuals were less likely to cope by

dysfunctional methods and hence, less prone to occurrence of depression. Maladaptive copings referred to self-distraction, denial, substance use, venting, behavioral disengagement, and self-blame in this study. To sum up, resilient individuals were more self-confident and used less maladaptive coping skills. Eventually, they were more likely to bounce back from hardship and less likely to develop depression.

Nevertheless, it was unexpected that view of world, hope, and adaptive coping did not significantly predict depression in students who experienced recent breakup. Although associations between depression and these variables were well-documented in previous studies (e.g. Chang, 2003; Mynatt, 1998), these associations were not generalized in people who reported a recent breakup. Therefore, one possible explanation was that these factors did not effect in the same way across different context. For example, researcher had argued that adaptive coping might lose its adaptive value in some contexts. According to Penley, Tomaka and Wiebe (2002), health outcome was determined by interaction between coping strategies and type of stressors instead of coping alone. In particular, when stressors were uncontrollable, adaptive coping strategies might be less associated with psychological well-being. One example was chronic disease like cancer. Carver *et al.* (1993) indicated that problem-focused coping strategies were not effective for women just diagnosed with breast cancer. Therefore, for breakup in which individuals also had little control, adaptive coping strategies that consisted active coping, planning and seeking instrumental support might not be beneficial for psychological well-being. Besides, positive view of world and high level of hope might motivate people to use more active coping strategies and this prevent them from being distress in face of controllable stressors. As mentioned, however, active coping might not be adaptive for coping with uncontrollable situations, such as breakup. Thus, how positive an individual viewed the environment and future might

lose their impact on emotional problems. As a result, adaptive coping, view of world and hope were not significant predictors of depression after recent breakup.

4.2. Implications

This was the first study that examined the effect of resilience on psychological distress among individuals reported recent breakup. Although resilience was found to be protective for individuals at risk in many occasions (e.g. Beasley, Thompson, & Davidson, 2003; Catalano, Chan, Wilson, Chiu, & Muller, 2011), more research on the generalizability of its effect was required for both theoretical and practical development. Given the prevalence and significance of breakup on individual' psychological outcome, this study tried to shed light on protective role of resilience in this specific context. The result suggested resilience was a protective factor against symptomology after experiencing breakup, especially depression. Moreover, the present study revealed that high self-esteem and low usage of maladaptive coping strategies were contributing to the impact of resilience on well-being. While resilience's value on individuals facing adversity was widely demonstrated, the mechanism of such value was relatively underdeveloped. The result contributed to understanding of how resilience can protect individuals from being overwhelmed by their relationship loss. Furthermore, the result could inform school counselors or educators who works with university students. Building resilience in students with resilience intervention would be beneficial for preparing them to encounter hardship in university, such as breakup of romantic relationship. They might hold activities recommended by Steinhardt and Dolbier (2008) or Gillham et al. (2006). Preventive measures could also be accomplished by teaching positive thinking about self and how to avoid using maladaptive coping strategies. These characteristics were found to be protective for students who experienced recent breakup and to reduce their vulnerability to depression.

4.3. Limitations

There were several limitations about the methodology and design of this study. First, the data was solely collected by self-report questionnaire. It might be particularly influential because some of the items required participants to response with regard to their last dating relationship. Some participants might avoid answering these emotionally charged items and hence their sincere responses were not gathered. Meanwhile, the questionnaire was a long measure and there were no incentives for taking part. Result collected from the later part of the questionnaire might subject to issue of fatigue and rapid decrease of motivation. Second, there was lack of measurement for the stressor. Although this study had measured and controlled variables such as ease of finding alternative or length of relationship that might have confound the result, these variables were not reliable indicators of the stressor. In other words, the values in these variables could not be aggregated to a score as the measure of stressfulness of breaking up. Without a valid measure of how overwhelming the breakup was, the result of present study should be applied with caution. For instance, one might fail to differentiate whether better adjustment was an outcome of resilience or less stressful relationship dissolution. Third, participants were recruited by convenient sampling and they took part voluntarily. For those who were very distressed, they were very likely to reject the invitation. Therefore, sampling in the present study might subject to self-selection bias and hence, their data might fail to represent individuals in the extreme ends. Forth, this was a cross-sectional survey research, with a major weakness of not able to draw causal conclusion. The present study only demonstrated an interrelationship between resilience and depression after breakup, whether resilience was the cause of fewer depressive symptoms or depression was the cause of less resilient remained unknown. Finally, cultural differences might limit the generalizability of result of present study. Despite ethnicity was not restricted in this study, ability to

read traditional Chinese was necessary to participate. According to Siu and Chang (2011), Hong Kong Chinese used more avoidance and detachment to cope with relationship-related stressors. Given that Western culture was more individualistic, European and American might be more active when cope with breakup. Thus the result might only applicable to Chinese population.

4.4. Future Directions and Conclusion

These limitations provided several directions for future research. Establishing a reliable measurement for the stressor (i.e. breaking up) was a case in point. With knowledge of how stressful the event was, individuals could be matched and comparison between counterparts could be made. One possible remedy for the self-selection bias was recruiting participants with help from school counseling center. Individuals who were severely affected by breakup might have sought help from student counselor, thus these minorities could be contacted and recruited. Moreover, in order to draw more confident conclusion of how resilience protect individuals from psychological distress after recent breakup, longitudinal study with randomized control group design should be adopted. Meanwhile, a study across different cultures would be even more informative. Notwithstanding the limitations addressed above, this was a significant attempt that tried to explore resilience in people after recent breakup and the underlying mechanism of resilience. In respect to the key research questions, the present study demonstrated that resilience could reduce the risk of developing post-breakup depression in university students. Meanwhile, resilience's impact on depression after breakup was mediated by self-esteem and use of maladaptive coping.

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Appendix: Consent form and Questionnaire

CONSENT TO PARTICIPATE IN RESEARCH 參與同意書

I consent to participate in this study that is designed to examine the effect of resilience on psychological distress following break up.

- I understand that my participation is voluntary and I may terminate my participation at any point without penalty.
- I understand that I will be asked some questions about my attitude, my behavioural patterns and my past relationship.
- I understand that information I provided will be kept confidential and anonymous, and will be destroyed after the research.
- I understand that if I have further questions about my participation, I may contact Isaac Yau at 97649867 or yuechiyau2-c@my.cityu.edu.hk.

我同意參與這項關於抗逆力對於由分手所引致的負面情緒的緩衝作用的研究。

- 我明白我是自願參與，並有權在任何時候及無條件下退出這次研究
- 我明白我會被問一些問題，內容包含關於我個人態度、個人的行為模式及最近一段愛情關係的資料
- 我明白我所提供的所有資料都會被保密及以不記名方式獲取，並且會在研究完結後全部銷毀
- 我明白若我有任何關於這研究的問題我能透過電話 97649867 或電郵 yuechiyau2-c@my.cityu.edu.hk 聯絡邱豫之

Signature 簽署: _____

Date 日期: _____

Participant # 參加者編號: ___（for official use 供負責人員使用）

第一部份

直至分手的一刻，這一段關係維持了：___年___月
分手那一刻距離現在：___年___月
我現在的感情狀況： 單身☐ 有合心意的對象☐ 戀愛中/已婚☐
其他☐
我的教育程度： 中學或以下☐ 大專☐ 研究院☐
我的性別： 男☐ 女☐
我的年齡：___

第二部份

Connor-Davidson Resilience Scale questions are not shown due to copy right.

第三部份

	以下部份是一些用來形容自己的句子，請閱讀每一句，然後圈出你平日一般的感覺。答案是沒有分對或錯的，不要花太多時間在任何句子上，只要將最能表達你平日一般感覺之答案顯示出來。	非常同意	同意	不同意	非常不同意
1.	我認為自己是一個有價值的人起碼和其他人一樣	1	2	3	4
2.	我認為自己擁有頗多優點	1	2	3	4
3.	總括而言，我傾向於覺得自己是一個失敗者	1	2	3	4
4.	我可以辦事如其他人一般的好	1	2	3	4
5.	我覺得自己沒有甚麼值得自豪	1	2	3	4
6.	我對自己有一個正面的態度	1	2	3	4
7.	大致而言，我對自己感到滿意	1	2	3	4
8.	我希望對自己可以更加尊重	1	2	3	4
9.	我有時感到自己的確沒有用	1	2	3	4
10.	有時候，我認為自己一無是處	1	2	3	4

第四部份

	以下是有關你對朋友及世界的觀點，請圈出合適的意見表達你對這些句子的感覺。	完全錯誤	大部份錯誤	一些錯誤	少許錯誤	少許正確	一些正確	大部份正確	完全正確
1.	大多數人都好友善及樂於助人	1	2	3	4	5	6	7	8
2.	當我有需要的時候，我認識的朋友都會幫助我	1	2	3	4	5	6	7	8
3.	我的日常活動是有趣及有益的	1	2	3	4	5	6	7	8
4.	在我生命中重要的人都是很支持我及幫助我的	1	2	3	4	5	6	7	8
5.	我有一個支持及給我溫暖的情人或朋友	1	2	3	4	5	6	7	8

第五部份

	請花一點時間把注意力放在**你自己身上**及在**這刻你生命中會發生的事**，然後圈出最合適的答案去形容**你覺得你現在怎樣**。	完全錯誤	大部份錯誤	一些錯誤	少許錯誤	少許正確	一些正確	大部份正確	完全正確
1.	如果我發覺自己在困境之中，我會想很多方法去離開。	1	2	3	4	5	6	7	8
2.	現在，我正在精力充沛追求理想。	1	2	3	4	5	6	7	8
3.	我目前面對的問題有很多出路。	1	2	3	4	5	6	7	8
4.	現在，我覺得自己都幾成功。	1	2	3	4	5	6	7	8
5.	我可以找到很多的方法去達成現在的目標。	1	2	3	4	5	6	7	8
6.	這一刻，我達到之前為自己建立目標。	1	2	3	4	5	6	7	8

第六部份

	以下句子形容了一些處理壓力或難題的手法，請分別閱讀每一句，在右方表示你採取該手法的頻繁程度。答案是沒有分對或錯的，各人亦會採取不同的手法。不要花太多時間在任何句子上，只要圈出最接近你的答案。	從不	很少	偶爾	經常
1.	我會投入工作或其他活動令自己停止想着那些事情	1	2	3	4
2.	我會為了改變自己的處境專注做一些事情	1	2	3	4
3.	我會對自己說「這不是真的」	1	2	3	4
4.	我會飲酒和使用藥物來令自己好過一點	1	2	3	4
5.	我會從其他人得到情緒上的支持	1	2	3	4
6.	我會放棄嘗試	1	2	3	4
7.	我會採取行動令我的處境改善	1	2	3	4
8.	我會拒絕相信事情這樣發生	1	2	3	4
9.	我會用說話來釋放不愉快的心情	1	2	3	4
10.	我會尋找別人的幫助和建議	1	2	3	4
11.	我會飲酒和使用藥物來協助自己渡過那些難關	1	2	3	4
12.	我會從不同角度去看待事情，令它比較正面	1	2	3	4
13.	我會指責自己	1	2	3	4
14.	我會嘗試想出一個解決辦法	1	2	3	4
15.	我會尋找別人的安撫和體諒	1	2	3	4
16.	我會放棄處理事情的意圖	1	2	3	4
17.	我會尋找難關中一些好的地方	1	2	3	4
18.	我會用那些事情來開玩笑	1	2	3	4
19.	我會做其他事令自己減少想着那些難題，例如看電影或電視、閱讀、發白日夢、睡覺、或購物	1	2	3	4
20.	我會接受那些事情的確發生了的事實	1	2	3	4
21.	我會表達我負面的情緒	1	2	3	4
22.	我會在我的信仰中尋找安慰	1	2	3	4
23.	我會尋找別人對於我該做什麼的建議和幫助	1	2	3	4
24.	我會學習與這些難題共存	1	2	3	4
25.	我會努力思想下一步該怎樣	1	2	3	4
26.	我會因那些事情的發生感到自責	1	2	3	4
27.	我會祈禱或冥想	1	2	3	4
28.	我會用自己的處境開玩笑	1	2	3	4

第七部份

	請根據你最近兩星期同今日的狀況，選擇一個最適當的選項。
1.	☐ 我不感到傷心
	☐ 很多時候，我感到傷心
	☐ 我常常感到傷心
	☐ 我非常傷心和不快，承受不了了

2.	☐	對於未來，我没有感到悲觀
	☐	相對過去，我對未來更悲觀
	☐	我感到没有什麼可指望的
	☐	我覺得未來没有希望，事情只會更差
3.	☐	我不覺自己是個失敗者
	☐	我遭受一些我不應該有的失敗
	☐	回想過去，我所看到的都是失敗
	☐	我覺得自己是彻底失敗了的人
4.	☐	我從過去享受的事情中得到很多的快樂
	☐	我不像過去般享受某些事
	☐	我從過去享受的事中得到很少的快樂
	☐	我從過去享受的事中得不到任何的快樂
5.	☐	我没有罪惡感
	☐	偶爾對我做的事或我應該做的事，我有罪惡感
	☐	很多時候，我有罪惡感
	☐	我總是有罪惡感
6.	☐	我不覺得自己正在受罰
	☐	我覺得自己可能遭受懲罰
	☐	我期望得到懲罰
	☐	我覺得自己正在受罰
7.	☐	我對自己的感覺像過去一樣
	☐	我對自己失去信心
	☐	我對自己很失望
	☐	我不喜歡自己
8.	☐	我不會比平常多了去批評或責罵自己
	☐	我比過去對自己更挑剔
	☐	對所有過失，我責備自己
	☐	每次發生不幸，我都會責怪自己
9.	☐	我没有任何想自殺的念頭
	☐	我有自殺的念頭，但不會真的去自殺
	☐	我真想自殺
	☐	如果有機會，我會自殺
10.	☐	和往常比較，我哭的次數並無增加
	☐	我現在比以前哭得更多
	☐	我為每件小事而哭泣
	☐	我想哭，但哭不出來
11.	☐	我不會比以前更易煩躁不安或緊張
	☐	我比以前更易感到煩躁不安或緊張
	☐	我常感到難以平静下來的煩躁不安或激動
	☐	我常覺得煩躁不安或激動，而且因此要不停移動或做些事情
12.	☐	我對他人或活動的興趣没有減少
	☐	和以前相比，我對其他人或活動的興趣減少了
	☐	我失去了對他人或活動的大部份興趣
	☐	我對任何事都毫無興趣
13.	☐	我與以往一樣能做决定
	☐	我現在做决定没有以前容易

	☐	我現在做决定比以前困难
	☐	我現在對任何事都不能做决定
14.	☐	我不覺得自己没有價值
	☐	我覺得自己没有以前般有價值及有用
	☐	比起他人，我覺得自己更没有價值
	☐	我認为自己一點價值都没有
15.	☐	我同過去一樣精力充沛
	☐	我精力不如以前了
	☐	很多事我都没有足夠的精力去做
	☐	我精力不夠，任何事都做不了
16.	☐	我没有經歷任何睡眠模式的改變
	☐	我比往常睡得稍微多
	☐	我比往常睡得稍微少
	☐	我比往常睡得更多
	☐	我比往常睡得更少
	☐	一天大部份時間，我都在睡覺
	☐	我比往常早醒 1-2 小時，而且再睡不着
17.	☐	我不比以往易怒
	☐	我比以往易怒
	☐	跟以往相比，我極其易怒
	☐	任何時候，我也易怒
18.	☐	我的食慾没有任何改變
	☐	我的食慾比以前稍微少
	☐	我的食慾比以前稍微多
	☐	我的食慾比以前更少
	☐	我的食慾比以前更多
	☐	我完全没有食慾
	☐	我時常渴求食物
19.	☐	我和以前一樣可以集中精神
	☐	我精神不如以前集中
	☐	長時間集中精神於任何事，我做不到
	☐	我發現任何事我都不能集中精神
20.	☐	我不比往常感到疲倦
	☐	我現在比以往容易疲倦
	☐	再做過去做過的很多事，我感到疲倦
	☐	再做差不多過去做過的所有事，我都感到很疲倦
21.	☐	最近我的性慾没有什麼變化
	☐	最近我的性慾不如以往
	☐	目前我的性慾比以往減退了很多
	☐	我完全没有性慾

第八部份

	請閱讀下列每題，並圈出最接近你過去一星期的情緒狀況。請不要花太多時間考慮你的答案，你對問題的立刻反應，往往比反覆思量來得更準確。	從不	極少	偶爾	經常	總是
1.	我經常想着前度男/女朋友，以致我連平日常做的事情都很難完成	1	2	3	4	5
2.	想起我的前度男/女朋友會令我難過	1	2	3	4	5
3.	我覺得我接受不了這次分手	1	2	3	4	5
4.	我感到我對前度男/女朋友懷着渴望	1	2	3	4	5
5.	和前度男/女朋友有關連的地點及事物會牽動我	1	2	3	4	5
6.	不能自制的對這次分手感到憤怒	1	2	3	4	5
7.	我無法相信發生這樣的事情	1	2	3	4	5
8.	我對發生這樣的事情感到震驚或惶惑	1	2	3	4	5
9.	自從分手以後，我很難再相信其他人	1	2	3	4	5
10.	自從分手以後，我覺得我失去了關心其他人的能力或我覺得離我關心的人都很遠	1	2	3	4	5
11.	自分手以後，我身體某些地方感到痛楚	1	2	3	4	5
12.	我想盡辦法去避開有關我前度男/女朋友的一切	1	2	3	4	5
13.	我覺得失去這個人，生命是空虛、無意義的	1	2	3	4	5
14.	我對這次分手感到痛苦	1	2	3	4	5
15.	我嫉妒那些從沒經歷分手的人	1	2	3	4	5
16.	自從分手以後，很長的一段時間我都感覺寂寞	1	2	3	4	5

第九部份

	下列句子是一些關於你對前度男/女朋友的看法。請閱讀每一句，並選取合適的意見表達你對這些句子的感覺。	非常不同意	十分不同意	不同意	沒意見	同意	十分同意	非常同意
1.	在分手之前，我滿意他/她的財政狀況	1	2	3	4	5	6	7
2.	在分手之前，我滿意他/她的外觀	1	2	3	4	5	6	7
3.	在分手之前，我能從他/她得到充足的情緒支援	1	2	3	4	5	6	7
4.	在分手之前，我認為他/她是可靠和可依賴的	1	2	3	4	5	6	7
5.	在分手之前，我和他/她有相似的喜好	1	2	3	4	5	6	7
6.	在分手之前，他/她關懷和明白我	1	2	3	4	5	6	7
7.	在分手之前，我滿意他/她的性格	1	2	3	4	5	6	7
8.	在分手之前，我和他/她的價值觀大致相同	1	2	3	4	5	6	7
9.	在分手之前，我滿意他/她的社會地位	1	2	3	4	5	6	7
10.	在分手之前，我們關係親密，他/她亦十分熟悉我	1	2	3	4	5	6	7
11.	在分手之前，他/她十分吸引我	1	2	3	4	5	6	7
12.	在分手之前，我對我的伴侶十分忠誠，亦努力維持這段關係	1	2	3	4	5	6	7
13.	我認為我很容易就能夠找到一個人去取代他/她	1	2	3	4	5	6	7

完