# Effects of grateful disposition, gender and gratitude condition towards psychological well-being

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## Abstract

Objectives. This study replicated previous studies on the effect of gratitude condition, and explored the effect of grateful disposition and gender and their interactive effects with gratitude condition, on psychological well-being of university student in Hong Kong.

Methods. All 150 participants (53 males, 97 females; mean age = 21.52, SD = 2.70) were Cantonese speaking university students recruited from four universities campuses in Hong Kong. They were required to respond the grateful disposition questionnaire and divided into high or low grateful disposition groups according to their scores of grateful disposition: those who scored equal or higher than 33 belonged to high grateful disposition group and others belonged to low grateful disposition group. Each participant was then randomly assigned into gratitude condition or hassles condition to participate the 14-days consecutive daily diaries. At the 14$^{th}$ day, they responded the psychological well-being measurements, including positive affect, negative affect, life satisfaction and depression.

Results. Results showed that gratitude condition elicited more gratitude. In addition, there was main effect of grateful disposition towards all four variables of psychological well-being. The main condition effect was only found on positive affect but it interacted with grateful disposition to influence both positive affect and negative affect. Neither main gender effect

nor its interaction with grateful disposition and / or grateful condition was found in this study.

Discussion. The findings showed that gratitude condition increased positive affect. It also implied that grateful disposition was a reliable predictor of psychological well-being and people with higher grateful disposition participated gratitude condition strengthened their positive affect and weakened their negative affect than other combinations. Moreover, the findings suggested people with higher grateful disposition were more influenced by the gratitude condition with a larger magnitude than those with lower grateful disposition. This provided an implication that difference people needed different gratitude manipulations.

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# Effects of grateful disposition, gender and gratitude condition towards psychological well-being

Gratitude is one of the pleasant emotional states that enables people live well. It is the positive recognition of the underserved benefits or gifts received and attribute the benefits or gifts to external sources (Bertocci & Millard, 1963; Solomon, 1977; McCullough, Emmons & Tsang, 2002). The core feature is “underserved” as people will feel more gratitude only if they considers the benefits or gifts as underserved or unexpected (McCullough, Kilpatrick, Emmons, & Larson, 2001; Woodward, 2000). The benefits or gifts can be material or nonmaterial (e.g. emotional) and the external sources of benefits or gifts could be human beings or nonhuman beings (e.g. God; Solomon, 1977; Teigen, 1997).

Gratitude could exist as an emotion or an affective trait. As an emotion, gratitude is the pleasant feelings about the benefits or gifts received. As an affective trait, the grateful disposition is “a generalized tendency to recognize and respond with grateful emotion to the roles of other people’s benevolence in the positive experiences and outcomes that one obtains” (McCullough, Emmons & Tsang, 2002, p. 112).

McCullough, Emmons and Tsang (2002) states that the affective trait of gratitude lowers one’s threshold for experiencing gratitude and this lowered threshold leads to the experiencing of gratitude that is characterized by four aspects: higher intensity, higher frequency, broader span (the number of life circumstances for which a person feels grateful at

a given time) and higher density (the number of persons to whom one feels grateful for a single positive outcome). Thus, people with higher grateful disposition will more likely to experience gratitude in response to the benefits received than people with lower grateful disposition. Sometimes, people with higher grateful disposition will able to appreciate and find the benefit in a negative circumstance as a positive outcome, such as when they are survival in a traumatic natural event.

Research showed that gratitude is a mediator of positive affect as gratitude has a positive emotional valence of making people feeling good (Lazarus & Lazarus, 1994; Mayer, Salovey, Gomberg-Kaufman, & Baliney, 1991; Ortony, Clore, & Collins, 1988; Weiner, 1985), such as contentment (Walker & Pitts, 1998), happiness, pride, and hope (Overwalle, Mervielde, & De Schuyter, 1995). In addition, gratitude builds and strengthens spirituality and social and interpersonal relationships (McCullough, Emmons, & Tsang, 2002). It also serves as an effective coping to stressful situations (Coffman, 1996; Ventura, 1982; Ventura & Boss, 1983).

Researchers have explored ways to enhance the experience of gratitude in people in order to enhance their positive affect and other psychological well-being. For example, Stone and Watkins (2001) randomly assigned the experimental groups in one of three gratitude conditions: thinking about someone they were grateful for, writing an essay about someone they were grateful to or writing a letter to someone they were grateful to. The rest of the

participants were assigned in the control condition and asked to write about the lay-out of their living room. The participants were also required to respond the positive affect, negative affect and bipolar affect scales. Results showed that all three gratitude conditions have increased in positive affect.

A longer duration of gratitude manipulations were done by Emmons and McCullough (2003). Their participants were randomly assigned into difference conditions (gratitude, hassles, neutral life events or social comparison) and instructed to keep daily or weekly diaries. The participants also asked to keep records of their positive and negative affect, coping behaviors, health behaviors, physical symptoms and global life appraisals. Results showed that gratitude condition elicited more gratitude by comparing the amount of gratitude rating across difference conditions. Most importantly, gratitude condition strengthened well-being of participants than other conditions, such as reported more positive affect, more optimism about the upcoming week or future, felt better about their lives as a whole, more likely to report having offered emotional support to others, did more exercises, reported fewer physical symptoms of physical illness.

Moreover, Emmons and McCullough (2003) demonstrated that daily gratitude manipulation was more effective in creating more gratitude and positive affect than weekly manipulation and the gratitude manipulation also did same effect on adults with neuromuscular diseases. Adults with neuromuscular diseases were randomly assigned into

two conditions: gratitude condition or control condition. Adults with neuromuscular diseases in control condition were asked to complete the affect, well-being and global appraisal only each day whereas those in gratitude condition were asked to keep daily diaries. Similar to their previous studies, adults with neuromuscular diseases of gratitude condition increased more positive affect, more satisfaction in life and greater optimism. Most importantly, there was a reduction in negative affect, improvement in amount and quality of sleep of adults with neuromuscular diseases in gratitude condition. This showed gratitude manipulation could help patients in releasing their negative emotions.

The findings of these gratitude interventions done by difference researchers were consistent. Gratitude manipulations elicited more gratitude and created positive well-being, such as happiness. Among these, increased positive affect appeared to be the most significant outcome.

The manipulations induced the participants of gratitude condition in a situation that forced on recognized and appreciated the benefits or gifts received and attributed these benefits or gifts to others in order to elicit their gratitude feelings. In addition, asking participants to express their gratitude to the benefit through expression of thinking and writing exercises released their enjoyment (Lewis, 1958). Thus, these showed the gratitude manipulations were effective in enhancing the experience of gratitude of people.

This study replicates the gratitude condition and reviews its effective on the

psychological well-being of university students in Hong Kong among four variables (positive affect, negative affect, life satisfaction and depression). Although research showed gratitude condition strengthened psychological well-being, the researcher of this study suspects individual differences might influence these findings. In correlational studies, people with higher grateful disposition reported higher positive affect and life satisfaction, and lower negative emotions such as depression and anxiety, than people with lower grateful disposition. In addition, people with higher grateful disposition were more prosocially oriented, more empathic, forgiving, helpful, and supportive, and less focused on the pursuit of materialistic goals and tend to be more spiritually and religiously minded compared with people with less grateful disposition (McCullough, Emmons, & Tsang, 2002; Watkins, Woodward, Stone, & Kolts, 2003).

Since both grateful disposition and gratitude condition are associated with positive psychological well-being, was the results of elicited more gratitude and created positive psychological well-being purely the effect of gratitude manipulations or the effect of grateful disposition? There is possible that the participants may be people with higher grateful disposition so they are more feelings toward gratitude and they are associated with positive psychological well-being even the gratitude manipulation was disappeared. Therefore, the researcher of this study suspects grateful disposition may be one of the factors in contributing the psychological well-being of participants who participated the gratitude condition.

Moreover, as both grateful disposition and gratitude condition are associated with positive psychological well-being, the researcher of this study predicts the interaction of grateful disposition x gratitude condition should enhance psychological well-being of people with higher grateful disposition. This means people with higher grateful disposition who participate gratitude condition should enhance their psychological well-being than other combinations, such as people with higher grateful disposition with hassles condition or people with lower grateful disposition with gratitude condition. Thus, this study not only replicates the effect of grateful disposition and the effect of gratitude condition towards psychological well-being, but also explore on the interactive effects of grateful disposition and gratitude condition on psychological well-being.

Apart from grateful disposition, the researcher also predicts gender may also act as a factor in influencing the results of gratitude manipulations towards psychological well-being. Although Watkins, Woodward, Stone and Kolts (2003) found that no significant gender effect or interactions involving gender on condition in their studies, there is some empirical evidence that gratitude is associated with feminine gender-role stereotypic traits (Brody, 1993). In addition, women experience stronger positive and negative emotions than men (Diener, Horowitz, & Emmons, 1985) as women are happier, report more positive affect and more satisfaction in life (Wood, Rhodes, & Whelan, 1989) but they are twice as likely to become depressed as men and experience more negative emotions in everyday life (Boyd &

Weissman, 1981; Nolen-Hoeksema, 1987, 1990) in general findings. Thus, the researcher of this study predicts women who participate in the gratitude manipulation should have larger positive feelings than men and women who participate in the hassles manipulation should have larger negative feelings than men. Thus, this study examines the effect of gender towards psychological well-being and explores the interactive effects of gender with grateful disposition and / or gratitude condition on psychological well-being.

In summary, this study replicated previous studies on the effect of gratitude condition, and explored the effect of grateful disposition and gender and their interactive effects with gratitude condition, on psychological well-being of university student in Hong Kong among four variables (positive affect, negative affect, life satisfaction and depression).

## Method

### *Participants and Procedure*

A convenience sample of 150 Chinese university students (53 males, 97 females; mean age = 21.52, SD = 2.70) were recruited from four universities campuses in Hong Kong in participating this study. All were native Cantonese speakers.

All participants would be briefed about the purpose and procedure of this study and obtained their consent (appendix I) before the experiment. The participants responded the grateful disposition questionnaire (appendix II) first and then all participants were divided into two groups according to their score of grateful disposition. As the median of their

grateful disposition was 33, 53% (N = 80) of the participants who scored equal or higher than 33 belonged to the high grateful disposition group and 47% (N = 70) of others were belonged to the low grateful disposition group.

Within the high or low grateful disposition, each participant was then randomly assigned into two conditions: gratitude condition (appendix III) or hassles condition (appendix IV). At the end of the day, participants returned their responses to the researcher before 12:00 midnight via e-mail. Responses sent to the researcher before 9:00am on the next day were also accepted. Participants repeated this exercise for 14 consecutive days. Only those participants have returned all the 13-day consecutive daily diaries to the researcher were asked to respond to the psychological well-being questionnaire (appendix V) on the 14$^{th}$ day via e-mail by the researcher and return the completed questionnaire together with their 14$^{th}$ day diaries to the researcher on the same night.

*Measures*

Grateful disposition

The Gratitude Questionnaire-6 (GQ-6), adopted from McCullough, Emmons and Tsang (2002), was used to measure the grateful disposition. The GQ-6 measured four facets of the grateful disposition: intensity, frequency, span and density. It consisted of six items to assess individual differences in the extent of experiencing gratitude in daily life. The participants were asked to indicate the extent to which they agreed with each item using the scale range

from 1 representing “strongly disagree” to 7 representing “strongly agree”. Questions 3 and 6 were reverse scored. The researcher of this study translated all the questions to Chinese and then translated them back to English in order to have accuracy in translation of the Chinese versions of GQ-6 (appendix II, part II). A higher score represented a higher disposition toward gratitude. The Cronbach’s alpha of the present study was .70.

Research Design

The participants were randomly assigned into two conditions: gratitude condition or hassles condition. Both two conditions were adopted from Emmons and McCullough (2003). Participants in the gratitude condition were asked to write their daily gratitude experience (up to five items) while those in hassles condition were asked to write their daily hassles experience (up to five items). The researcher also used the back translation method to obtain the Chinese instructions for writing daily gratitude diaries (appendix III) and daily hassles diaries (appendix IV). Examples of gratitude experiences listed by the participants of this study were “my parent loves me”, “food is delicious”, “wonderful friends” and “good academic result” whereas examples of hassles experiences listed by the participants were “poor health”, “poor relationship with my girl friend”, “difficulties in collecting information in final year project” and “my friend did not appreciate my work”.

Psychological well-being

The Chinese Affect Scale (CAS) (Hamid & Cheng, 1996) was used to measure the trait

and state positive (PA) and negative affect (NA) for Chinese speaking people (appendix V, part II). It consisted of 20 items of which 10 were positive affects and 10 were negative affects. All items were rated on a 5-point Likert-type scale ranging from 1 representing “rarely” to 5 representing “very often”. A higher score in that affect represented greater extension in that affect. The Cronbach’s alpha for positive affect and negative affect of CAS in the present study were .9 and .93 respectively.

The Chinese version of Satisfaction With Life Scale (Cheng, 2004) (appendix V, part III) was used to measure the life satisfaction. The participants were asked to indicate the extent to which they agreed with each item. Items are rated on a 7-point Likert-type scale ranged from 1 representing “strongly disagree” to 7 representing “strongly agree”. A higher score represented higher satisfaction in life. The Cronbach’s alpha in this study equaled .84.

The Center for Epidemiologic Studies Depression Scale (CES-D) (Cheng & Chan, 2005) was used (Appendix V, part IV). The CES-D consisted of 20 questions to measure depressive symptomatology in the general population (Radloff, 1977). The participants were asked to indicate the numbers of days in which a depressive symptom occurred over the past week using a scale of 0 representing “less than one day” to 3 representing “five to seven days”. Items 4, 8, 12 and 16 were reverse scored. Thus, the total scores on the CES-D Scale can ranged from 0 to 60. A total score of 16 served as a cutoff to differentiate “cases” of depression from noncases. Thus, the scores below 16 indicated that the respondent is “not

depressed", scores from 16 to 20 indicated "mild depression," scores from 21 to 30 indicated "moderate depression" and scores of 31 and greater indicated "sever depression". The Cronbach's alpha of CED-D of the present study was .9.

*Statistical Analysis*

This study was an experimental design consisted of two levels of grateful disposition (high vs. low) x two levels of gender (male vs. female) x two conditions (gratitude vs. hassles). The researcher rated each written item in all the diaries, including both the gratitude and hassles diaries, as "gratitude event", "hassles event" or "neither gratitude nor hassles event" scoring. Thus, if the item described gratitude, one score would be gained for the "gratitude event". Each participant would have scoring on "gratitude event", "hassles event" and "neither gratitude nor hassles event". The total scoring of these three events ranged from 0 to 70. The researcher then conducted a 2 (grateful disposition) x 2 (gender) x 2 (conditions) ANOVA to find out whether the main effects of grateful disposition, gender, the conditions and their interactive effects on diaries' events.

To check the rating of the researcher, the researcher randomly picked a total of 210 diaries (10% of the total diaries), which consisted of 105 gratitude diaries and 105 hassles diaries, from all the diaries and invited another person to rate (0 = neither gratitude nor hassles event, 1 = gratitude event and 2 = hassles event) these 210 diaries. A kappa test was examined to determine the agreement between the researcher and that person.

A 2 (grateful disposition) x 2 (gender) x 2 (conditions) ANOVA was conducted to examine the effects of grateful disposition, gender, the conditions and their interactive effects on psychological well-being among four variables: positive affect, negative affect, life satisfaction and depression.

## Results

The researcher invited another person to rate the same 210 diaries (10% of total diaries) and conducted a kappa test. A .77 value of kappa was obtained which showed that there was good agreement between the researcher and the invited person. It implied the researcher was objective in rating the diaries.

The mean scores of participants' diaries events were broken down by the levels of grateful disposition (high vs. low), gender (male vs. female) and conditions (gratitude vs. hassles) showed in table 1. A 2 (disposition) x 2 (gender) x 2 (conditions) ANOVA on diaries items was conducted. The findings showed that only main condition effect was found on gratitude diaries events and hassles diaries events, $F(1, 142) = 259.63, 425.83$, respectively, $p < .05$. Thus, gratitude condition elicited more gratitude than hassles condition whereas hassles condition elicited more hassles than gratitude condition.

The mean scores of psychological well-being were broken down by the levels of grateful disposition (high vs. low), gender (male vs. female) and conditions (gratitude vs. hassles) showed in table 2. A 2 (disposition) x 2 (gender) x 2 (conditions) ANOVA on psychological

well-being was conducted. Results showed there were main effect of grateful disposition towards positive affect, negative affect, life satisfaction and depression, $F(1,142) = 18.63$, 4.81, 21.64, 18.69, respectively, $p<.05$. Thus, people with a higher grateful disposition were associated with higher positive and life satisfaction, and lower negative affect and depression. It suggested that grateful disposition was a reliable predictor across all the four variables.

The main condition effect was only found in positive affect, $F(1,142) = 5.85$, $p<.05$, among the two experimental groups. Hence, gratitude condition led to more positive affect disregarding level of grateful disposition. Although condition had no effect on other variables except positive affect, it interacted with grateful disposition to influence both the positive affect and the negative affect of participants ($F(1,142) = 6.24$, 4.83, respectively, $p<.05$). Their interactive effects were showed in figure 1 and figure 2. Therefore, people with a higher grateful disposition participated gratitude condition strengthened their positive affect and lowered their negative affect.

There was neither main gender effect nor its interaction with grateful disposition and / or condition towards diaries events and psychological well-being among two experimental groups. This suggested gender effect did not exist.

## Discussion

The findings showed that there were individual differences associated with psychological well-being as there was main effect of grateful disposition towards all four

variables of psychological well-being. Thus, people with a higher grateful disposition reported higher positive affect and life satisfaction, and lower negative affect and depression compared with those with lower grateful disposition (McCullough, Emmons, & Tsang, 2002; Watkins, Woodward, Stone, & Kolts, 2003). This may due to the lowered threshold for experiencing gratitude and their external attribution towards outcome of people with a higher grateful disposition, so people with higher grateful disposition will more likely to experience gratitude in response to the benefits received than people with lower grateful disposition, even in a small positive outcome or in negative circumstance. This demonstrated that the proposal by McCullough, Emmons and Tsang (2002) that the disposition toward gratitude caused discrete emotional experiences and people with higher grateful disposition felt more grateful experiences intensely, more frequently in positive event, experienced gratitude for a larger numbers of life circumstances (e.g. health and life itself) and attributed each positive outcome to a greater numbers of people. Therefore, disposition toward gratitude is a significant and reliable predictor of psychological well-being.

Although there was no main effect of grateful disposition on diaries events on both gratitude diaries and hassles diaries, these might because there was possible that measure frequency cannot provide a comprehensive representation of the amount of gratitude elicited. The researcher measured the frequency of gratitude events written down in the diaries and then analysis the scoring of numbers of gratitude and hassles event items. According to

McCullough, Emmons and Tsang (2002), a grateful disposition people should characterized by four aspects: higher intensity, higher frequency, broader span (the number of life circumstances for which a person feels grateful at a given time) and higher density (the number of persons to whom one feels grateful for a single positive outcome). Therefore, frequency is only one of the characteristics of people with grateful disposition and there is possible that one single item in diary may consists of difference span, intensity and density.

This study replicated the pervious research in Western countries that gratitude manipulations, such as the gratitude daily diaries in this study, elicited more gratitude feelings and these gratitude experiences increased people's positive affect (McCullough, Emmons, & Tsang, 2002; Stone & Watkins, 2001; Watkins, Woodward, Stone, & Kolts, 2003; Woodward, 2000). This demonstrated that the gratitude has a positive emotional valence (Lazarus & Lazarus, 1994; Mayer, Salovey, Gomberg-Kaufman, & Baliney, 1991; Ortony, Clore, & Collins, 1988; Weiner, 1985), so gratitude manipulations did increase the positive affect of participants through experiencing and expressions of their gratitude feelings in real life. In addition, this implied that the gratitude manipulation was applicable in Hong Kong. Therefore, experiencing and expressing gratitude has a significant effect on positive effect.

The previous research found the gratitude manipulation also associated with other variables, such as increased life satisfaction and decreased negative affect but these were not found in this study. Although there was no main condition effect on negative affect, the

condition interacted with the grateful disposition did influence the negative effect. In addition, there was also an interaction effect of grateful disposition and gratitude condition on positive affect. Thus, the interaction of gratitude disposition and gratitude condition strengthen positive affect and lowered negative affect for people with higher grateful disposition compared with other combinations, such as people with higher grateful disposition with hassles condition or people with lower grateful disposition with gratitude condition.

These findings also showed that there were individual differences in the result of gratitude condition: people with a lower grateful disposition participated gratitude condition have smaller magnitude changed in positive and negative affects than people with a higher grateful disposition. This may due to the positive affect and negative affect of people with high grateful disposition were more easily influenced by the environment that those of people with low grateful disposition. In addition, this may be an easy task for people with high grateful disposition to express their gratitude feelings in daily diaries as they have lowered threshold for gratitude and they attribute outcome towards external. However, it might be a difficult task for people with lower grateful disposition, so it was unable to create strong magnitude of grateful feelings and improve largely in their positive affect and negative affect even they were focused in a situation that forced on recognized and appreciated the benefits or gifts received and attributed these benefits or gifts to others. Therefore, this provided an implication that a strong and successful gratitude intervention program should match with the

characteristics of difference people (e.g. grateful disposition) as the gratitude daily diaries seems offer smaller magnitude to people with lower grateful disposition.

One important finding was that people with lower grateful disposition have a lower negative affect in hassles condition than gratitude condition. This may imply that people with lower grateful disposition need ways to release their negative emotions. Daily hassles diaries may act as an effective coping method for them to release their negative emotions and pressure in daily life through expressing their negative feelings.

Although some empirical evidence that gratitude is associated with feminine gender-role stereotypic traits (Brody, 1993) and females experience stronger emotions in both positive and negative than men (Diener, Horowitz, & Emmons, 1985), the results in this study showed there was neither main gender effect nor its interaction effect with grateful disposition and / or condition on diaries events and psychological well-being. It is consistent with the finding of Watkins, Woodward, Stone and Kolts (2003) that no significant gender effect or interactions involving gender on condition in their studies. However, this was inconsistent with the general findings that females are happier, more positive affect and more satisfaction in life but they are twice as likely to become depressed as men and experience more negative emotions in everyday life. Therefore, these results provided an importance point that gender factor did not exist.

However, several limitations may contribute to the results of this study. First, the present

data was collected by convenience sampling, the result may not generalized to all university students. In addition, the psychological well-being was measured immediately after the participants completed their 14-day consecutive daily diaries. The duration of this effect is unknown. The effect may maintain or disappear later. Further study should plan a long-term gratitude manipulation and regular checking after the gratitude manipulation is needed to ensure the effect of gratitude manipulation.

# References

Bertocci, P. A., & Millard, R. M. (1963). *Personality and the good: Psychological and ethical perspectives*. New York: McKay.

Boyd, J. H., & Weissman, M. M. (1981). Epidemiology of affective disorders. *Archives of General Psychiatry, 38*, 1039-1046.

Brody, L. R. (1993). On understanding gender differences in the expression of emotion. In S. L. Ablon (Ed.), *Human feelings: Explorations in affect development and meaning* (pp. 87-121). Hillsdale, NJ: Analytic Press.

Cheng, S. T. (2004) Endowment and contrast: The roles of positive and negative emotions in well-being appraisal. *Personality and Individual Differences*, 37, 905-915.

Cheng, S. T., & Chan, A. C. M. (2005). The Center for Epidemiologic Studies Depression Sales in older Chinese: Thresholds for long and short forms. *International Journal of Geriatric Psychiatry, 20*, 465-470.

Coffman, S. (1996). Parents' struggles to rebuild family life after Hurricane Andrew. *Issues in Mental Health Nursing, 17*, 353-367.

Diener, E., Horowitz, J., & Emmons, R. A. (1985). Happiness of the very wealthy. *Social Indicators Research, 16*, 263-274.

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of*

*Personality and Social Psychology, 84 (2)*, 377-389.

Hamid, P. N., & Cheung, S. T. (1996). The development and validation of an index of emotional disposition and mood state: *The Chinese affect scale. Educational and Psychological Measurement, 56(6)*, 995-1014.

Lazarus, R. S., & Lazarus, B. N. (1994). *Passion and reason: Marking sense of our emotions*. New York: Oxford University Press.

Lewis, C. S. (1958). *Reflections on the Psalms*. New York: Harcourt, Brace.

Mayer, J. D., Salovey, P., Gomberg-Kaufman, S. & Blainey, K. (1991). A broader conception of mood experience. *Journal of Personality and Social Psychology, 60*, 100-111.

McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology, 82*, 112-127.

McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Gratitude as moral affect. *Psychological Bulletin, 127*, 249-266.

McCullough, M. E., Tsang, J., & Emmons, R. A. (2004). Gratitude in intermediate affective terrain: Links of grateful moods to individual differences and daily emotional experience. *Journal of Personality and Social Psychology, 86*, 295-309.

Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin, 101*, 259-282.

Nolen-Hoeksema, S. (1990). *Sex differences in depression*. Stanford, CA: Stanford University Press.

Ortony, A., Clore, G. L., & Collins, A. (1988). *The cognitive structure of emotions*. Cambridge, UK: Cambridge University Press.

Overwalle, F. V., Mervielde, I., & De Schuyter, J. (1995). Structural modeling of the relationships between attributional dimensions, emotions, and performance of college freshmen. *Cognitive & Emotion, 9*, 59-85.

Radloff, L.S. (1977). The CES-D scale: a self report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.

Solomon, R. C. (1977). *The passions*. Garden City, NY: Anchor Books.

Stone, T. L., & Watkins, P. C. (2001, May). *Does the expression of gratitude improve mood?* Paper presented at the 81st Annual Convention of the Western Psychological Association, Maui, HI.

Teigen, K. H. (1997). Luck, envy, and gratitude: It could have been different. *Scandinavian Journal of Psychology, 38*, 313-323.

Ventura, J. N. (1982). Parent coping behaviors, parent functioning, and infant temperament characteristics. *Nursing Research, 31*, 269-273.

Ventura, J. N., & Boss, P. G. (1983). The Family Coping Inventory applied to parents with new babies. *Journal of Marriage and the Family, 45*, 867-875.

Walker, L. J., & Pitts, R. C. (1998). Naturalistic conceptions of moral maturity. *Developmental Psychology, 34*, 403-419.

Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. (2003). Gratitude and happiness: Development of a measure of gratitude, and relationships with subjective well-being. *Social Behavior and Personality, 31*, 431-452.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*, 548-573.

Wood, W., Rhodes, N., & Whelan, M. (1989). Sex differences in positive well-being: A consideration of emotional style and marital status. *Psychological Bulletin, 106*, 249-264.

Woodward, K. M. (2000, April). *The effect of gratitude on mood states*. Paper presented at the annual convention of the Western psychosocial Association, Portland, OR.

Table 1

*Diaries Events as a Function of Grateful Disposition and Condition*

| | | Gratitude condition (30 males vs. 46 females) (39 high grateful disposition vs. 37 low grateful disposition) | | Hassles condition (23 males, 51 females) (41 high grateful disposition vs. 33 low grateful disposition) | |
|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD |
| Gratitude Events | Male | 26.4 | 12.46 | .43 | 1.67 |
| | Female | 28.89 | 14.76 | .1 | .57 |
| | High grateful disposition | 29.08 | 12.37 | .1 | .62 |
| | Low grateful disposition | 26.68 | 15.35 | .33 | 1.41 |

| | | | | | |
|---|---|---|---|---|---|
| Hassles Events | Male | 0 | 0 | 18.17 | 6.51 |
| | Female | .2 | .75 | 19.39 | 7.53 |
| | High grateful disposition | .13 | .66 | 18.9 | 6.51 |
| | Low grateful disposition | .11 | .52 | 19.15 | 8.09 |
| Neither Gratitude nor | Male | 1.1 | 1.99 | 1 | 1.71 |
| Hassles Events | Female | .72 | 1.11 | 1.04 | 1.64 |
| | High grateful disposition | .9 | 1.57 | .93 | 1.66 |
| | Low grateful disposition | .84 | 1.48 | 1.15 | 1.64 |

Table 2

*Psychological Well-being as a Function of Grateful Disposition and Condition*

| | | Gratitude condition (30 males vs. 46 females) (39 high grateful disposition vs. 37 low grateful disposition) | | Hassles condition (23 males, 51 females) (41 high grateful disposition vs. 33 low grateful disposition) | |
|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD |
| Positive affect | Male | 3.21 | .81 | 2.93 | .74 |
| | Female | 3.14 | .8 | 2.88 | .8 |
| | High grateful disposition | 3.58 | .68 | 3.04 | .74 |
| | Low grateful disposition | 2.73 | .67 | 2.72 | .8 |

| | | | | | |
|---|---|---|---|---|---|
| Negative affect | Male | 2.32 | .92 | 2.53 | .9 |
| | Female | 2.5 | 1 | 2.79 | .99 |
| | High grateful disposition | 2.08 | .79 | 2.76 | .98 |
| | Low grateful disposition | 2.79 | 1 | 2.65 | .94 |
| Life satisfaction | Male | 4.05 | 1.28 | 3.62 | 1.03 |
| | Female | 4.08 | 1.21 | 4.09 | 1.32 |
| | High grateful disposition | 4.68 | 1.04 | 4.30 | 1.17 |
| | Low grateful disposition | 3.42 | 1.08 | 3.49 | 1.21 |
| Depression | Male | 18.53 | 10.7 | 20.96 | 10.55 |
| | Female | 19.24 | 10.59 | 21.55 | 11.41 |
| | High grateful disposition | 14.13 | 8.36 | 19.39 | 11.04 |
| | Low grateful disposition | 24.05 | 10.33 | 23.82 | 10.8 |

Figure 1

*Effect of Condition on Positive Affect as a Function of Grateful Disposition*

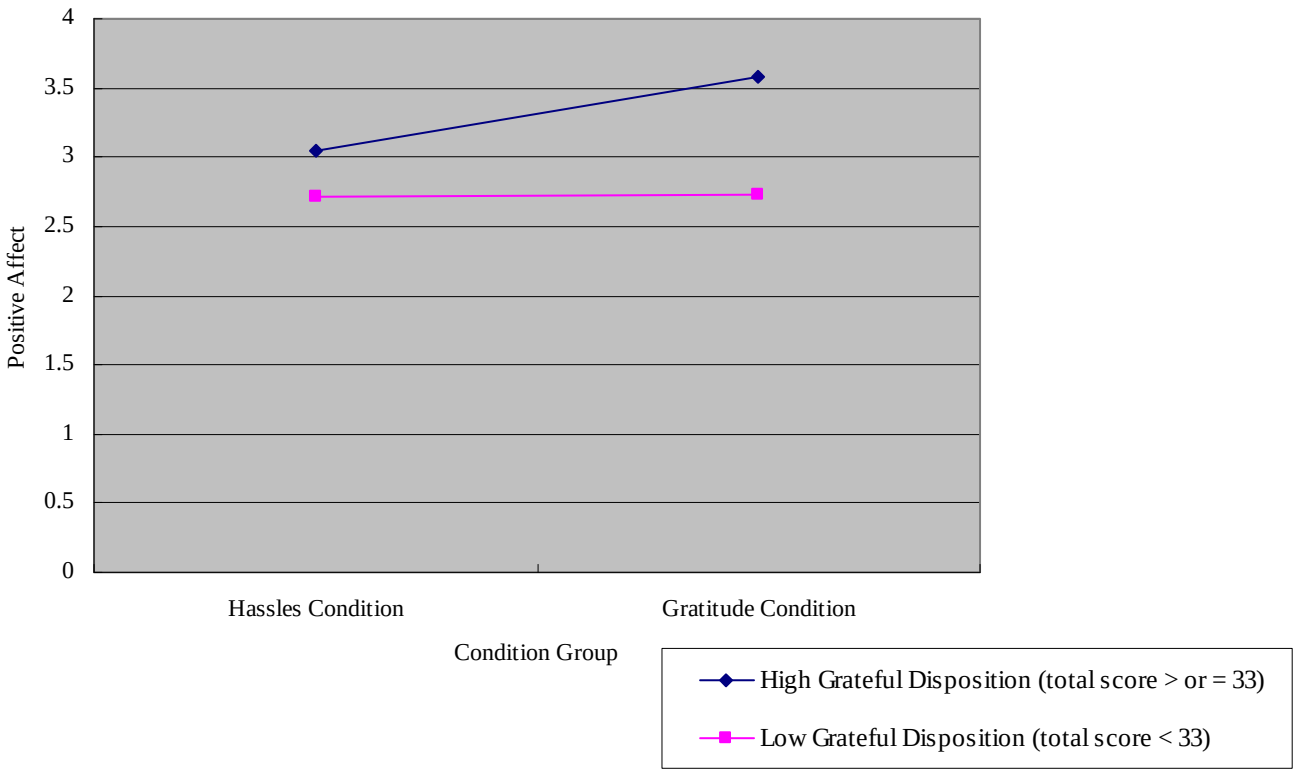
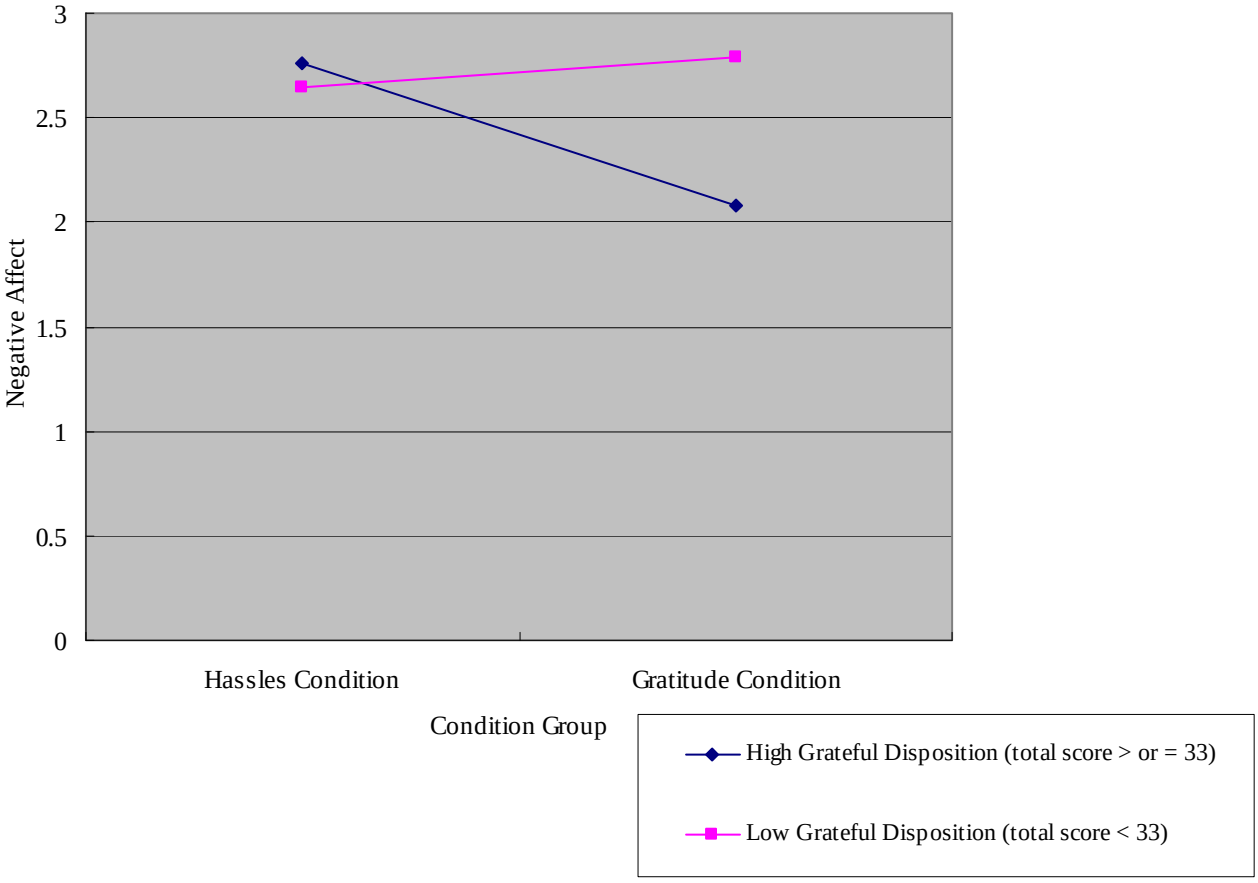


Figure 2

*Effect of Condition on Negative Affect as a Function of Grateful Disposition*



Appendix I

**香港城市大學 - 參與心理學研究同意書**

***大學生性格及健康精神的關係***

***(Dispositional and Mental Health of University Students)***

**內容：**

我們誠意邀請閣下參與這項旨於了解「大學生性格及健康精神的關係」之研究。只要你沒有每天寫日記的習慣，便有資格參加。這項研究包含兩份問卷及歷時兩個星期的簡短問卷***(每天只需回答一條問題)***。首先，你將會填寫一份關於你的性格的問卷，然後你會填寫歷時兩個星期的簡短問卷***(每天只需回答一條問題)***，最後你需要填寫健康精神的問卷。

**檔案保密：**

*你的簽署證明你同意參與以上的研究，你的身份將被保密。*

**權利：**

有關這項研究的問題，可與負責研究員聯絡。你有權在任何時間退出這項研究，並不須要提供任何理由。

***如你有興趣參與這項研究，請簽署及填寫以下資料，交回李韻婷小姐 Ms. Wendy Lee。***

***如有問題，請與李韻婷小姐 Ms. Wendy Lee聯絡***

---

本人_____(姓名) 合資格及有興趣參加這項研究。我現提供電郵地址(_____)及電話(_____)是用來作聯絡用途。

簽署:_____

日期:_____

Appendix II

編號.: _____

**<u>問卷調查</u>**

這問卷是城市大學的研究計劃之一。多謝你回答此問卷。請細心閱讀問卷的每項指示，並按照指示完成問卷，這問卷沒有對與錯的答案，請誠實作答，且選擇一個最能形容你的答覆。所有資料將會保密及用作研究。當你完成問卷後，請放進信封內，然後交回發給你的人，多謝合作！

*第一部份 - 個人資料*

請在適當的位置填上√ 號，或在空格的地方填上適當的答案。

1. 姓名： _____

2. 性別： ☐ 男 ☐ 女

3. 年齡： _____

4. 教育程度： ☐ 大學一年級 ☐大學二年級 ☐ 大學三年級

5. 就讀大學:：_____

6. 學系： _____

7. 宗教：

☐ 有，如有，

☐ 天主教 ☐ 基督教 ☐ 佛教 ☐道教

☐ 伊斯蘭教 ☐ 其他:_____

☐ 沒有

8. 電郵地址： _____

9. 電話：_____

**第二部份**

以下各項是形容你的性格，你有多大程度上同意呢？請用下面的數字表達出你對每一個句子的同意度。1 = 強烈不同意，2 = 不同意，3 = 有一點不同意，4 = 持平，
5 = 有一點同意，6 = 同意， 7 = 非常同意。

_____ 我生命中有非常多值得感謝的地方。

_____ 假如要我列出值得感謝的事，這張單子會很長。

_____ 我看不到這世界有什麼值得感謝的地方。

_____ 我對很多人都很感激。

_____ 我年紀越大，越能感受到生命中的人、事、物對我的幫助，他們是我生命歷史的一部份。

_____ 要經過很久的時間以後，我才會對某人或某事感到感激。

*多謝你的合作！*

Appendix III

姓名：_____ 日期：_____

電郵地址： _____ 電話：_____

在人生中有很多令我們感到感激的事情。試回想今天有那些感激的事情(***最少一項、最多五項***)，請在以下空位用**中文**填上及在**晚上十二時或之前電郵**至Wendy Lee。例子：我今天吃了個很好味的早餐、有愛我的父母。

1) _____

_____

2) _____

_____

3) _____

_____

4) _____

_____

5) _____

_____

Appendix IV

姓名：_____ 日期：_____

電郵地址： _____ 電話：_____

在人生中有很多令我們感到不開心、沮喪或灰心的事情。試回想今天有那些艱難的事情(***最少一項、最多五項***)，請在以下空位用**中文**填上及在**晚上十二時或之前電郵**至Wendy Lee。例子：我今天測驗成績很差、我今天趕不上巴士。

1) _____
_____

2) _____
_____

3) _____
_____

4) _____
_____

5) _____
_____

Appendix V

編號.: _____

## 問卷調查

這問卷是城市大學的研究計劃之一。多謝你回答此問卷。請細心閱讀問卷的每項指示，並按照指示完成問卷，這問卷沒有對與錯的答案，請誠實作答，且選擇一個最能形容你的感覺。所有資料將會保密及用作研究。當你完成問卷後，請放進信封內，然後交回發給你的人，多謝合作！

*第一部份 - 個人資料*

***請在適當的地方填上適當的答案。***

1. 姓名: _____

2. 性別: ☐ 男 ☐ 女

3. 電郵地址： _____

4. 電話：_____

*第二部份*

以下各項是形容你過去一個星期內的感覺，請圈上最適合的一個。選擇由 1 =近乎沒有至 5 =經常。在過去一個星期內，你感到：(請圈上最適合的一個)

| | 近乎沒有 | 偶然 | 間中 | 有時 | 經常 |
|---|---|---|---|---|---|
| 有意義 | 1 | 2 | 3 | 4 | 5 |
| 失望 | 1 | 2 | 3 | 4 | 5 |
| 稱心如意 | 1 | 2 | 3 | 4 | 5 |
| 冇安全感 | 1 | 2 | 3 | 4 | 5 |
| 輕鬆 | 1 | 2 | 3 | 4 | 5 |
| 開心 | 1 | 2 | 3 | 4 | 5 |
| 情緒低落 | 1 | 2 | 3 | 4 | 5 |
| 筋疲力竭 | 1 | 2 | 3 | 4 | 5 |
| 煩躁 | 1 | 2 | 3 | 4 | 5 |
| | 近乎沒有 | 偶然 | 間中 | 有時 | 經常 |

| | | | | | |
|---|---|---|---|---|---|
| 辛苦/難受 | 1 | 2 | 3 | 4 | 5 |
| 喜悅 | 1 | 2 | 3 | 4 | 5 |
| 活力充沛 | 1 | 2 | 3 | 4 | 5 |
| 平靜 | 1 | 2 | 3 | 4 | 5 |
| 傷心 | 1 | 2 | 3 | 4 | 5 |
| 緊張 | 1 | 2 | 3 | 4 | 5 |
| 舒服 | 1 | 2 | 3 | 4 | 5 |
| 無助 | 1 | 2 | 3 | 4 | 5 |
| 興奮 | 1 | 2 | 3 | 4 | 5 |
| 滿足 | 1 | 2 | 3 | 4 | 5 |
| 驚 | 1 | 2 | 3 | 4 | 5 |

*第三部份*

請細心閱讀以下句子，並以 1 至 7 去表示你對該句子之同意程度。選擇由 1 = 極之不同意至 7 = 極之同意。請圈上最適合的一個。

| | | 極之不同意 | 不同意 | 有一點不同意 | 持平 | 有一點同意 | 同意 | 極之同意 |
|---|---|---|---|---|---|---|---|---|
| 1. | 在很多方面，我現時的生活跟理想頗接近。 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | 我的生活條件非常好。 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | 我對自己的生活感到滿意。 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | 到目前爲止，我已經取得我生命裡重要的東西。 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | 如果我能夠再活一次，幾乎沒有甚麼東西是我想改變的。 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

*第四部份*

以下各項是形容過去一個星期內你的感覺，你有幾天會有那樣的感受和行爲呢？請圈上最適合的一個。

| | | 近乎沒有 | 1-2 天 | 3-4 天 | 5-7 天 |
|---|---|---|---|---|---|
| 1. | 爲一些小事擔心。 | 0 | 1 | 2 | 3 |
| 2. | 不太想吃東西；胃口很差。 | 0 | 1 | 2 | 3 |
| 3. | 雖然家人或朋友的勸解，仍是覺得悶悶不樂。 | 0 | 1 | 2 | 3 |
| 4. | 覺得自己同其他人一樣好。 | 0 | 1 | 2 | 3 |
| 5. | 沒辦法集中注意力做事。 | 0 | 1 | 2 | 3 |
| 6. | 覺得心情抑鬱。 | 0 | 1 | 2 | 3 |
| 7. | 覺得做每一件事都很費氣力。 | 0 | 1 | 2 | 3 |
| 8. | 覺得未來充滿希望。 | 0 | 1 | 2 | 3 |
| 9. | 覺得這一生是失敗的。 | 0 | 1 | 2 | 3 |
| 10. | 覺得很擔心、害怕。 | 0 | 1 | 2 | 3 |
| 11. | 睡不安穩(如半夜睡醒後難再入睡)。 | 0 | 1 | 2 | 3 |
| 12. | 覺得很快樂。 | 0 | 1 | 2 | 3 |
| 13. | 說話比平時少。 | 0 | 1 | 2 | 3 |
| 14. | 覺得很寂寞、孤單。 | 0 | 1 | 2 | 3 |
| 15. | 覺得人們並不很友善。 | 0 | 1 | 2 | 3 |
| 16. | 熱愛生命，很享受人生。 | 0 | 1 | 2 | 3 |
| 17. | 曾經想大哭一場。 | 0 | 1 | 2 | 3 |
| 18. | 感到傷心。 | 0 | 1 | 2 | 3 |
| 19. | 覺得別人不喜歡你。 | 0 | 1 | 2 | 3 |
| 20. | 做事提不起勁(如沒精神做事)。 | 0 | 1 | 2 | 3 |

*多謝你的合作！*