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The Effect of Initial Coping on Subsequent Coping, and the Role of Neuroticism

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Abstract

This research studied how initial coping of stress affected subsequent expected coping strategies, and whether neuroticism moderated this effect. The mediating effects of subsequent expected coping strategies on initial coping and both negative affect and problem-solving self-efficacy were also explored. Ninety-three undergraduate students participated in the experiment. Participants read a scenario that elicited negative emotions and were instructed to use specific initial coping strategy, either cognitive writing (writing down their positive thoughts) or emotional writing (writing down their emotions), to cope with the negative event. They were then asked to report their subsequent expected coping strategies, and both their negative affect and problem-solving self-efficacy were assessed. Results showed that the initial use of emotional writing, versus the initial use of cognitive writing, was related to the higher use of problem-focused coping as subsequent expected coping strategy, and the effect was especially seen in the high neuroticism group. However, neuroticism did not significantly moderate the relationship of emotional writing and subsequent expected coping strategies. In addition, problem focused coping as subsequent expected coping strategies mediate the effect of initial coping and problem-solving self-efficacy. Active coping, under the cluster of problem-focused coping was specifically found to mediate the relationship of initial coping and both negative affect and problem-solving self-efficacy. The implications of these findings were discussed.

The Effect of Initial Coping on Subsequent Coping, and the Role of Neuroticism

When people encounter stressors, they employ coping strategies to cope with them. There is a wide range of coping strategies that people may use, and Carver, Scheie, and Weintraub (1989) classified different coping strategies into problem-focused coping and emotion-focused coping. According to Carver et al. (1989), problem-focused coping refers to the actions that are directed to change the source of stress. Problem-focused coping includes coping strategies like actively coping with stress, planning, suppressing other activities, waiting for opportunity, and finding social support for instrumental help. For instance, when a student failed in a mid-term examination, he or she decides to study hard for the final examination. According to Carver et al. (1989), on the other hand, emotion-focused coping refers to the actions taken to manage emotional distress induced by a stressor (Carver et al., 1989). Emotion-focused coping includes finding social support for emotional help, positive thinking, acceptance, denial, and finding a religion. For instance, when a student failed in a mid-term examination, he or she cries in order to release emotional tensions or perhaps tries to reinterpret the mid-term examination as unimportant.

When facing a stressor, people believe that putting their head before their heart is more helpful. Many people believe that problem-focused coping is more effective than emotion-focused coping (Ntoumanis & Biddle, 1998). Furthermore, previous research has demonstrated the effectiveness of problem-focused coping and the ineffectiveness of emotion-focused coping (Ben-Zur, 2009). Yet, to how far is this true? In fact, some recent research gradually recognized the importance of emotions in coping (Greenberg, 2008).

Coping Styles and Emotion

When people encounter stressors in their daily life, coping styles may play a significant role in influencing their experience of emotions (Ben-Zur, 2009). Research has found that problem-focused coping was positively correlated with positive affect and

negatively correlated with negative affect whereas emotion-focused coping was found to be

largely and positively associated with negative affect (Ben-Zur, 2009). Emotion-focused

coping was even found to be significantly positively associated with some physical symptoms

of stress (Nakano, 1991) as well as psychopathological symptoms (Watson & Sinha, 2008).

Nevertheless, coping strategies is not the sole agent that determines emotions. In fact,

McCrae and Costa (1986) proposed that the relations between coping and well-being

diminished after partialling out the personality variables, specifically, neuroticism and

extraversion. This suggests that personality may play a more important role in determining

people's emotions than simply coping styles.

Coping Styles and Personality

Despite the fact that people may experience similar emotions towards an event, they

probably do not experience exactly the same degree and combination of emotions, partly due

to individual differences such as personality. For instance, people high in neuroticism (high N

people) tend to feel more negatively than people low in neuroticism (low N people) towards

the same negative event (Larsen & Ketelaar, 1989, 1991). In addition, high N people tend to

use different coping strategies as individuals high in extraversion (Boland & Cappeliez,

1997). However, the extent to which neuroticism affect the process of coping and the choice

of coping strategies is not clearly known. Research has found that low N people are more

likely to use problem-focused coping whereas high N people are more likely to use

emotion-focused coping (Boyes & French, 2009). As neuroticism is significantly positively

related to negative emotions, and high N people tends to use more emotion-focused coping

than problem-focused coping as compared to low N people, problem-focused coping seems

to be more adaptive whereas emotion-focused coping sounds more maladaptive.

Although emotion-focused coping is generally found to be ineffective and perhaps

even detrimental in coping with negative events, its frequent use among some people makes

it logical to suspect that emotion-focused coping may play a functional role. This functional role may keep people using it even it is believed to be ineffective by others. In fact, recent research has shown that emotion was an adaptive resource and its importance was gradually recognized, especially in clinical settings (Greenberg, 2008). Recent research has shown that expressive writing, which requires participants to write down their emotions freely, was an effective coping strategy in helping people to reduce their negative emotions (Graf, Gaudiano & Geller, 2008; Kállay & Băban, 2008). Thus, not all kinds of emotion-focused coping were maladaptive.

Emotion-Focused Coping

There is a general consensus on the classification of problem-focused coping and its effectiveness is well-documented. However, the definition of emotion-focused coping is not very precise. For instance, Carver et al., (1989) did not believe that emotion-focused coping was one coherent construct, but regarded elements other than problem-focused coping as variations in emotion-focused coping. These coping variations grouped under emotion-focused coping are not all directly related to emotions; some are related to cognition and some are associated with avoidance. As there was inconsistent use of the term *emotion-focused coping*, it is normal that the results of its effectiveness were not in agreement. Nevertheless, affect is highly associated with cognition; they cannot be easily separated because they affect each other all the time. The two components that are highly related to emotions and highly interrelated are the affective component and the cognitive component, and each is considered below.

Cognitive Coping

It is a common knowledge that how people think can affect their experience of emotions. Albert Ellis' (1991) ABC model suggested that when there was an activating event (A) happened, people would interpret it as bad or good using their belief system (B), which

would then trigger an emotional consequence (C). However, people could change their belief

system, a component related to cognition, in order to change their experience of emotions.

Reinterpretation, despite being grouped under emotion-focused coping, actually focuses more

on cognitive component than affective component. Positive reinterpretation includes thinking

positively despite the occurrence of a negative event. It is a common belief that positive

thinking can reduce negative emotions and enhance well-being, which is also one of the

central beliefs in positive psychology. In addition, constructive thinking was found to mediate

the relationship between neuroticism and subjective well-being (Harris & Lightsey, 2005).

However, in a different light, Ng and Diener (2009) suggested that positive thinking does not

work well for everyone. They found that positive thinking strategies including reinterpreting

and coping with negative events could help low N people to reduce negative affect, but did

no significant help to high N people. In other words, neuroticism moderated the relationship

between positive thinking and negative emotions. The moderating effect of neuroticism

suggests that high N people may need something more than positive thinking to help them

reduce their experience of negative emotions.

Affective Coping

Despite the fact that positive thinking yielded many credits for its positive

contribution to positive emotions (Harris & Lightsey, 2005), the direct dealing of affect in

emotion-focused coping did not earn the same amount of credits. For instance, venting of

emotions is one of the emotion-focused coping strategies related to the affective component.

Research has generally found that venting of emotions was significantly positively associated

with negative affect (Felton, Revenson, & Hinrichsen, 1984). Nevertheless, there was

research showing that venting of emotions was found to be negatively associated with anxiety

(Carver et al., 1989). This shows that venting of emotions can actually be beneficial

sometimes, but limited research has been done in investigating the positive outcomes of

emotion ventilation. Interestingly, Ntoumanis and Biddle (1998) found that the perceived effectiveness of emotion-focused coping moderated its effect on affect, and particularly, the use of venting of emotions could significantly reduce negative affect if the perceived effectiveness of this coping strategy was high. Another possible explanation for this finding is that the venting of emotions was effective for some people in reducing negative affect, and thus their perceived effectiveness on emotion-focused coping was high. This suggests that venting of emotions can be effective or adaptive sometimes.

A closer examination on research that has found venting of emotions to be positively related to negative affect reveals most of them have not tried to differentiate different types of venting of emotions. For instance, Felton et al. (1984) studied the role of stress and coping on psychological adjustment of patients with chronic illness and one of the coping strategies being measured was emotional expression. However, the measure being used did not take the degree of venting of emotions into consideration and did not specify the particular way of emotion ventilation. For example, one of the items being used was simply "let your feelings out somehow." Failure to differentiate different types of emotion ventilation may lead to apparent inconsistent results in previous research.

Venting of emotions can be differentiated into two types, strong and mild venting of emotions, based on the use of aggressive behaviors in venting. Strong venting of emotions is defined here as the venting of one's emotions that may do harm to oneself or others, or both, for instance, hitting a person to release anger. Mild venting of emotions is defined here as the venting of one's emotions without doing harm to self and others, which includes crying, expressive writing such as emotional blog or diary, and expressing emotional words in Facebook statuses. Strong venting of emotions may be harmful whereas mild venting of emotions may be helpful for the individuals to relieve the intense negative affect that they experience. Recently, much research has been done on expressive writing and it has been

shown to be an effective coping strategy. For instance, expressive writing was found to

significantly reduce anxiety and depressive symptoms of outpatient clients (Graf et al., 2008).

Furthermore, expressive writing was also found to reduce distress, improve physical and

psychological functioning (Kállay & Băban, 2008), increase optimism and decrease negative

affect (Soliday, Garofalo, & Rogers, 2004). In addition, the effectiveness of expressive

writing in reducing negative emotions could also be extended to organizational settings

(Barclay & Skarlicki, 2009).

Coping Flexibility and Interaction of Coping Strategies

In coping with stress, people do not use just one type of coping strategies across

different situations. Individuals who cope flexibly may use different coping strategies

depending on the situations (Cheng & Cheung, 2005). People use differentiation to

distinguish among stressors regarding controllability and impact. Then, they employ

integration to consider trade-offs among different types of coping strategies and try to cope

differently across different situations, again depending on controllability and impact of the

stressors. Aside from coping flexibly with different strategies in different situations, both

emotion-focused coping and problem-focused coping can actually be used together at a given

time and have more desirable outcome (Sideridis, 2006). Therefore, an optimal coping

strategy may involve the combination of different coping strategies. Furthermore, the

effectiveness of using a combination of different coping strategies may also influenced by the

sequence in applying different combination of coping strategies. However, the possible

sequence effect has not been studied in previous research.

Neuroticism and Negative Affect

Neuroticism is the personality trait that was studied most under the discussion of

coping and emotions. McCrae (1991) conceptualized neuroticism as negative affectivity,

which refers to the constant experience of negative emotions that includes fear, guilt, and

frustration. Similarly, neuroticism is characterized as related to facets of anxiety, anger, depression, self-consciousness, impulsiveness, and vulnerability to stress (Goldberg et al., 2006). Research in the past has found that neuroticism was positively related to negative affect (e.g., Costa & McCrae, 1980; Watson & Clark, 1992). Costa and McCrae (1980) even found that neuroticism could predict negative affect over 10 years. Different perspectives offer different explanations on the well-documented relationship between neuroticism and negative affect. The temperament perspective proposes biological factors in influencing personality differences. In other words, people born with different temperament tend to react differently to the same situation. There are two views under the temperament perspective that try to elucidate how personality affects emotions. The affect-level view proposes that individuals different in neuroticism have different levels of negative affect and it suggests that high N people experience more negative emotions than low N people, in almost any situation or circumstances (Gross, Sutton, & Ketelaar, 1998). In other words, the difference in negative affect between high N people and low N people should be observed at pre-manipulation and post-manipulation in experimental studies. The affective-reactivity view proposes that individual difference in neuroticism causes differences in reactivity to negative stimuli, and particularly it suggests that high N people tends to react more negatively to negative stimuli (Gross et al., 1998). Findings by Gross et al. (1998) have supported both models. These two models suggested that high N people experience more intense negative emotions than low N people.

Given that high N people experience more intense negative emotions than low N people, as supported by both the affect-level model and the reactivity-level model (Gross et al., 1998), it suggests that normal coping that works for low N people may not be enough to help high N people. For instance, positive thinking was found to be an effective coping method for low N people, but not for high N people (Ng & Diener, 2009). This suggests that

high N people need something more than just thinking positively to help them reduce

negative emotions. In order to reduce the intense negative emotions that high N people

experience, it may be helpful to reduce their heightened negative affect and let them feel

calmer first. For instance, people may feel better and calmer after crying, before they really

do something to tackle the source of the stressors. Thus, the application of affective coping in

the short run for high N people may benefit them in the long run. The use of cognitive coping

as initial coping by high N people, however, may make them more likely to choose affective

coping and less likely to choose problem-focused coping as subsequent expected coping

strategies. The rationale is that high N people experience heightened negative affect and

therefore need to release it ultimately some point in time.

The Present Research

Existing research acknowledged the effectiveness of problem-focused coping,

whereas some research investigating the effectiveness of emotion-focused coping yielded

inconsistent results. Although quite a number of research demonstrated emotion-focused

coping as ineffective, some research has also shown some benefits of using emotion-focused

coping. Nevertheless, there is an inconsistent classification of emotion-focused coping. By

using Carver et al.(1989)' s coping scale, some research studying emotion-focused coping

considered all the coping variations other than problem-focused coping as emotion-focused

coping. However, the emotion-focused coping construct included a variety of subscales like

social support, venting of emotions, and cognitive reinterpretation. The present research aims

to focus on two domains of emotion-focused coping which are most related to emotions,

namely *venting of emotions* (affective) and *positive reinterpretation and growth* (cognitive) in

Carver et al.'s model (1989). These two domains are much related to each other, yet they do

not mean the same thing. Specific manipulations based on the two domains were used to

make them more concrete. Regarding the manipulation of initial coping strategies, expressive

writing (emotional writing) was used specifically as an example of affective coping, and positive thinking applied in writing (cognitive writing) was used as a form of cognitive coping strategies.

Some research has tried to study the interaction of both problem-focused coping and emotion-focused coping (Sideridis, 2006), which demonstrated that it is beneficial sometimes for people to use both coping strategies at a given time. However, almost none of them studied whether initial coping could affect subsequent expected coping strategies. This study will examine how different initial coping strategies towards a negative event can affect subsequent expected coping strategies.

The present study also suggested that neuroticism would moderate the effect of initial coping, either cognitive or affective, on the subsequent expected coping strategies which includes affective coping, cognitive coping, and problem-focused coping. Specifically, it was hypothesized that after the exposure to a negative stimulus, people in the emotional writing group would be more likely to use problem-focused coping as subsequent expected coping strategies than people in the cognitive writing group, and the effect was expected to be stronger for high N people than for low N people. Also, it was hypothesized people in the emotional writing group would be less likely to use affective coping as subsequent expected coping strategies than the cognitive writing group, and the effect was expected to be stronger for high N people than for low N people. In addition, this study would also examine the indirect effect of initial coping on post-manipulation negative affect and problem-solving self-efficacy (PSSE), through the influence of subsequent expected coping strategies. The conceptual model describing the effect of initial coping on subsequent expected coping strategies, the moderating effect of neuroticism and the indirect effect of initial coping on post-manipulation negative affect and PSSE was considered in this study (see Figure 1).

Method

Participants

Ninety-three undergraduate students (30 males and 63 females) from the University of Macau participated in the study, with age between 18 and 24 (mean = 20.65). Only undergraduate students were recruited to preserve the homogeneity of the data to increase statistical power (Shadish, Cook & Campbell, 2002). Among the 93 graduate students, 39.8% were from Year 1, 9.7% were from Year 2, 10.8% were from Year 3 and 39.8% were from Year 4.

Materials

Neuroticism. Neuroticism was measure by a scale from the Big Five (Goldberg et al., 2006), which is a 20-item measure. Participants were asked to assess how well the items described them, ranging from 1 (*very inaccurate*) to 5 (*very accurate*). A sample item was "Often feel blue". Among the 20 items, ten of them were reversed items and were randomized in the current study. During analysis, the 10 reversed items were reverse-scored and the neuroticism score was obtained as an average score of the 20 items. The scale showed a good reliability of $\alpha = .81$.

Negative affect. Negative affect measure was adapted from Ng and Diener (2009), and four out of five negative emotions used originally was selected for the present study. The scale measured participants how they felt anxious, angry, sad and disappointed at that specific moment on a 7-point scale. A score of 1 meant they did not feel that way at all, a score of 4 meant it was somewhat describing what they felt at that moment and a score of 7 meant they felt very strongly that way at that time. The total scores of the 4 items made up a score representing negative affect. However, four unrelated items were added and the whole scale contained eight randomized items. This was to reduce the memory effect as this scale was measured at three different points in the experiment. During the three different points of

measurement, the negative affect scale contained the same eight items, but the items were randomized each of the three times. Time1 negative affect (T1NA) was measured before the negative scenario was presented in order to record baseline negative affect. This consisted of the 8-item scale discussed above. The T1NA scale yielded a reliability of $\alpha = .73$. Time2 negative affect (T2NA) was measured after the negative scenario was presented in order to record the reactivity of negative affect of participants to the scenario. Results showed that T2NA scale had a good reliability of $\alpha = .83$. Lastly, Time3 negative affect (T3NA) was measured after the subsequent expected coping strategies were rated to illustrate the effect of both initial coping and subsequent expected coping strategies. T3NA also demonstrated a good reliability of $\alpha = .87$. Ideally, negative affect should also be measured after the initial coping to see its effect; however, due to the fact that negative affect was already measured at three different points in the experiment, the forth time was given up after balancing the trade-off between comprehensiveness and validity of the negative affect measure.

Scenario. A paper scenario and voice recording of the scenario were presented to participants. They were asked to read with the pace of the voice recording and to imagine that they were the main character of the story. The story described an intelligent student who carried a lot of expectations from parents, teachers and friends to get into a very good graduate school. The student's father whom the student confided with was very sick. The student passed the written examination of the two top graduate schools, but was rejected by them because of poor interview performance, which was probably affected by the father's sickness. The student did not know how to cope with the situation and was very depressed as a result. The voice recording lasted about seven minutes.

Initial coping. Initial coping was manipulated in two ways, namely emotional writing and cognitive writing. Emotional writing was applied as a mild form of "venting of emotions" under emotion-focused coping (Carver et al., 1989). Specifically, emotional writing that

comprised of free emotion disclosure about the negative event was used as the manipulation.

Cognitive writing was adapted from "positive reinterpretation and growth" under

emotion-focused coping (Carver et al., 1989), which used the four items as the guidelines in

leading participants to write down their thoughts about how to view the negative event

positively, but not writing down emotions. The reason for having cognitive coping used in the

form of writing was to make the manipulation more comparable to the emotional writing

group. Emotional writing was coded as 0 and cognitive writing was coded as 1 for data

analysis.

Subsequent expected coping strategies. Subsequent expected coping strategies were

considered among three clusters in this study, namely affective coping, cognitive coping and

problem-focused coping (Carver et al., 1989). Affective coping contained three subscales,

namely mild venting of emotions, strong venting of emotions and venting of emotions.

Originally, mild venting of emotions contained four items designed by the author; however,

due to the low reliability of $\alpha = .46$, the scale was analyzed using factor analysis. One item

was deleted and the other item was grouped under the category of strong venting of emotions.

The mild venting of emotions were left with two items and showed a reliability of $\alpha = .54$.

The item that was regrouped from mild venting to strong venting was "I will scold others in

my mind". The rationale for regrouping the item was due to two reasons. First, the item

showed a negative correlation with the items from the mild venting of emotions scale and a

positive correlation with the items from the strong venting of emotions scale. Second,

conceptually, the item was so similar to an item "I will scold others." in the strong venting

scale and scolding people in the mind could be aggressive and could also cause changes in

facial expression which may hurt others or dampen relationships between people. In such a

consideration, this item actually fitted into the concept of strong venting of emotions. The

strong venting of emotions were also constructed by the author and originally consisted of

four items and with an additional item from mild venting of emotions; it contained a total of

five items with a reliability of $\alpha = .72$. The venting of emotions consisted of four items from

"focusing on and venting of emotions" under emotion-focused coping (Carver et al., 1989).

The scale yielded a reliability of $\alpha = .53$. Cognitive coping adopted four items from "Positive

Reinterpretation and growth" under problem-focused coping (Carver et al., 1989), which

were also used as guidelines in the cognitive writing. Cognitive coping demonstrated a

reliability of $\alpha = .69$. Problem-focused coping included three subscales, which were planning,

active coping and seeking social support for instrumental reasons, and each of the three

subscales consisted of four items (Carver et al., 1989). Planning had four items and yielded a

reliability of $\alpha = .71$. Seeking social support for instrumental reasons showed a reliability of α

$= .60$ and active coping had a reliability of $\alpha = .53$. Participants responded to how likely they

would use these subsequent expected coping strategies on a 5-point scale, from very unlikely

to very likely.

Problem-solving self-efficacy. Problem-solving self-efficacy was measured by the

Problem-Solving Self-Efficacy (PSSE) Scale derived from the Problem Resolution Outcome

Survey (Heppner, Cooper, Mulholland, & Wei, 2001). It was a 9-items scale. Participants

were asked to report how much the items were able to describe them on a 5-point scale, with

1 as "strongly disagree" to 5 as "strongly agree". A sample item was "I feel capable of coping

with my problem". The PSSE scale yielded a good reliability of $\alpha = .80$.

Demographics. Gender, age, and year of education were asked and participants

responded at the end of the experiment. Female was coded as 0 and male was coded as 1 for

data analysis.

The Chinese version of the questionnaire was shown in Appendix. A

Procedure

Participants were recruited by using snowball sampling. The author introduced the

general purpose of the study to potential participants in the University of Macau and invited them to take part in the study. They were also asked to invite their friends to take part in the study. Participants were assured that they would not be identified personally and their response in the experiment would be kept strictly confidential. Only those who were willing to participate were invited to sign up for one of the nine experiment sessions with different day and time. All nine experiment sessions were conducted within one week.

On the test day, the experiment took place in a quiet classroom. Participants were asked to sit in particular rows, leaving an empty seat between participants so as to prevent participants from looking at others' responses and also to let participants feel safer to disclose their feelings. In addition, the sitting arrangement also aimed to prevent others from knowing that they were given different instructions written on paper on each of the two experimental groups. Participants were given informed consent to sign to show that their willingness in participating in the experiment. They were also told that they could leave the experiment at any time they want to without reasons. Each participant got a big envelope enclosed with all the questionnaires required in the study. The experiment was divided into sessions and in each session, all participants took out a sheet of questionnaire and they would start and end each session at the same time. Only after all the participants had finished a session, they put the finished questionnaire back in the envelope and start the next session altogether at the same time. First, participants were given five minutes to fill in a neuroticism personality scale and a T1NA scale. Then, they were given about seven minutes to read and listen to the voice recording of the story, and in the process to imagine that they were the main character of the story. The voice recording was provided to keep the pace of all participants in reading the story and also to induce similar emotional experience for them. Afterwards, they were given 10 minutes to respond to T2NA scale and at the same time be instructed to use initial coping to cope with the negative scenario. From that point onwards, participants were randomly

divided into two groups to be assigned to use one of the two different initial coping strategies, namely affective coping (writing down their emotions) and cognitive coping (writing down their positive thoughts), by different instructions written on paper. Participants would not be told that they were assigned in either of the two groups. For Group 1, they were instructed to disclose their deepest emotions towards the negative event described in the scenario and to write down their deepest feelings and emotions on the piece of paper provided. For Group 2, they were instructed to write down their thoughts about how they could positively look at the negative event on the piece of paper provided. After the manipulation, they were given five minutes to fill in the subsequent expected coping strategies questionnaire about what they were going to do to cope with the negative event in the near future if they were the main character. Finally, participants got three minutes to fill in the T3NA scale, the PSSE scale and some demographic information of the participants. In the end, they were given a brief verbal debriefing and a written debriefing sheet of the experiment, which highlighted the purpose and introduction of the experiment, and the information about where they could seek help if they felt uncomfortable about the process. They were also asked to leave their email for a more detailed debriefing after all the experiments were done and analyzed.

Results

Neuroticism and Negative Affect

In order to test the *affect-level* view on how neuroticism affects negative affect, specifically, whether high N people show higher scores of negative affect than low N people on both pre-manipulation and post-manipulation. Results from linear regression demonstrated that participants with high score of neuroticism significantly predicted T1NA, $t(91) = 4.84$, $p < .001$, $\beta = 0.45$. However, neuroticism did not significantly predict T2NA and T3NA. Therefore, results only partially confirmed the affect-level view of negative affect. Paired sample T-Test demonstrated that participants scored significantly higher in T2NA than in

T1NA (M=3.76 vs 1.88, p<.001), which acted as a manipulation check for use of scenario in inducing negative affect. The reactivity of negative affect towards the manipulation was viewed as the difference between T2NA and T1NA (T2NA-T1NA). However, results from regression showed that neuroticism could not significantly predict T2NA-T1NA, $t(91) = 1.63$, p=.107, β = -0.17, which failed to support the affective- reactivity view of negative affect.

Initial Coping

Forty-six participants were assigned to the emotional writing group and the remaining 47 participants were assigned to the cognitive writing group. Participants had a mean score of neuroticism of 2.86 (SD=.45), and participants from the emotional writing group showed that they did not had significant different mean score in neuroticism than the participants from cognitive writing group (M=2.87 vs. 2.84).

Inter-correlation

Table 1 illustrated the correlation among initial coping, neuroticism, negative affect, subsequent expected coping strategies, PSSE and demographic variables. In examining relationship between initial coping and subsequent expected coping strategies, we found from correlation that initial coping was negatively correlated with problem-focused coping ($r =$ -.22, $p = .035$) and negatively correlated with active coping ($r = -.29$, $p = .005$). In other words, people who were assigned to use emotional writing initially, when compared to using cognitive writing initially, displayed a higher use of problem-focused coping as subsequent expected coping strategies, especially for active coping. However, these results would be further explored in subsequent analyses. For subsequent expected coping strategies and T3NA, problem-focused coping was negatively correlated with T3NA ($r = -.32$, $p = .002$); affective coping was positively correlated with T3NA ($r = .23$, $p = .028$); cognitive coping was negatively correlated with T3NA ($r = -.26$, $p = .012$). Results revealed that people who chose to use more subsequent problem-focused coping or cognitive coping were related to

lower subsequent negative affect. Also people who chose to use more subsequent affective coping were related to later higher negative affect. For subsequent expected coping strategies and PSSE, problem-focused coping was positively correlated with PSSE ($r = .34$, $p = .001$); affective coping was negatively correlated with PSSE ($r = -.40$, $p < .001$); cognitive coping was positively correlated with PSSE ($r = .42$, $p = .000$). In other words, people who chose to use more problem-focused coping or cognitive coping were more likely to think that they could solve the problem whereas people who chose affective coping as subsequent expected coping strategies felt that they were less capable of solving the problem. However, these results from correlation just provided a general overview of the effect of subsequent expected coping strategies on negative affect and PSSE; it did not give a clear direction and meaning on the relationships. As a result, mediation analyses would be considered later to give a better understanding of the relationships.

Initial Coping and Subsequent Expected Coping Strategies

Results from hierarchical regression showed that initial coping could predict subsequent expected coping strategies of problem-focused coping. As neuroticism was found to be related to specific coping strategies, neuroticism was controlled to see the effect of initial coping on subsequent expected coping strategies. Neuroticism was put in block 1 and initial coping was entered in block 2 to predict each of the different clusters of subsequent expected coping strategies. Results indicated that the initial use of emotional writing, compared to the initial use of cognitive writing, could predict the higher use of problem-focused coping, $\Delta R^2 = .05$, $t(90) = -2.18$, $p = .032$, $\beta = -.22$. However, initial coping could neither predict subsequent affective coping nor cognitive coping. When looking closer at the components of different clusters of subsequent expected coping strategies, result from another hierarchical regression showed that the initial coping of emotional writing, versus cognitive writing, was a strong predictor of active coping, $\Delta R^2 = .09$, $t(90) = -2.98$, $p = .004$, $\beta =$

-.29. However, the prediction of other subsequent expected coping strategies were not significant.

The Moderating Effect of Neuroticism

In order to see the effect of neuroticism had on the relationship between initial coping and subsequent expected coping strategies, participants were divided into high N group and low N group using the median split. Linear regression demonstrated that initial coping could predict subsequent expected coping strategies of active coping in the high N group, specifically, the initial use of emotional writing could predict the use of more active coping than the initial use of cognitive writing, R^2=.13, $t(43)$ = -2.56, p=.014, β = -.36. This effect was not seen in low N group. In addition, linear regression showed that the initial use of emotional writing, versus the initial use of cognitive writing, could also marginally predict the use of more problem-focused coping in high N group, R^2=.08, $t(43)$ = -1.94, p=.059, β = -.28. When examining the interaction effect of neuroticism and initial coping (N x Coping) on subsequent expected coping strategies, results from hierarchical regression showed that the interaction effect of neuroticism and initial coping was not significant. In other words, neuroticism did not have enough power to moderate the relationship of initial coping on subsequent expected coping strategies.

Mediation Analyses

Mediation analyses using bootstrap method with Preacher and Hayes's (2009) SPSS script were run to study the mediating effect of subsequent expected coping strategies on coping and T3NA and PSSE. First, initial coping was entered as the independent variable; problem-focused coping, affective coping and cognitive coping were entered as mediators, T3NA was used as the outcome variable. Neuroticism and T2NA were controlled and 5,000 bootstrap samples were used. Results of mediation analyses were shown in Figure 2. The figure showed that the path from initial coping to problem-focused coping (*a* path) was

significant (β=-0.16, p=.032) and the path from problem-focused coping to T3NA (b path) was significant (β=-1.01, p=.002) and the path from initial coping to T3NA (c' path) was not significant, which indicated a full mediating effect by problem-focused coping on initial coping and T3NA. The bootstrap results for indirect effect (ab path) indicated that the full mediating effect was significant (β=0.16, SE=0.10, 95% CI = [0.01, 0.39]). In other words, people who use problem-focused coping, as a result of initial coping, would experience less subsequent negative emotions. The mediating effects of the seven subsequent expected coping strategies were also tested, but the results were not significant for any of the subsequent expected coping strategies. Therefore, individual elements of subsequent expected coping strategies might not have enough power to predict negative affect, but the net effect of active coping, planning, and seeking social support for instrumental reasons, which made up problem-focused coping, might have enough power to do so.

Mediation analyses were also used to study the effect of three different clusters of subsequent expected coping strategies on initial coping and PSSE. Neuroticism was controlled and 5,000 bootstrap samples were employed. Bootstrap results were shown in Figure 3, which demonstrated that problem-focused coping acted as a full mediator between initial coping and PSSE. The a path was significant (β=-0.16, p=.032) and the b path was also significant (β=0.38, p=.019) whereas the c' path was not significant (β=0.20, p=.055). The bootstrap result for indirect effect (ab path) was significant (β=-0.06, SE=0.04, 95% CI = [-0.18, -0.01]). However, the affective coping and the cognitive coping clusters did not show significant mediating effect on initial coping and PSSE. Results demonstrated that people who chose to use more problem-focused coping as a result of initial coping would have higher PSSE.

The mediating effects of the seven subsequent expected coping strategies on initial coping and PSSE were also tested, and the results were shown in Figure 4. Neuroticism was

controlled and 5,000 bootstraps samples were used. The bootstrap results for indirect effect

revealed that only active coping showed significant effect. The path from initial coping to

active coping (a path) was significant (β=-0.28, p=.004) and the path from active coping to

PSSE (b path) was not significant (β=0.25, p=.068). The direct path from initial coping to

PSSE (c' path) was significant (β=0.25, p=.015). The bootstrap results for indirect effect (ab

path) was significant (β=-0.07, SE=0.04, 95% CI = [-0.19, -0.01]). In other words, people

who chose to use more active coping, as a result of initial coping, would had a higher PSSE.

Discussion

Results suggested that people did not just use one coping strategy throughout the

problem-solving process. For instance, the emotional writing group did not use more

subsequent affective coping than the cognitive writing group; and the cognitive writing group

did not have a higher use of subsequent cognitive coping than the emotional writing group.

More importantly, the emotional writing group, versus the cognitive writing group, did have a

higher use of subsequent problem-focused coping. As the effectiveness of problem-focused

coping was widely acknowledged, the results confirmed the benefits of using expressive

writing in coping with stress as suggested in previous studies (Graf et al., 2008; Kállay &

Băban, 2008; Soliday et al., 2004). Results from this study supported the idea that people

might cope with stressors differently in different problem-solving stages, and how people

cope initially might affect how they cope later. In addition, the timing and sequence of

applying different coping strategies may affect the effectiveness of those strategies. For

instance, the initial use of cognitive writing, versus the initial use of emotional writing, was

not beneficial in a way that it did not affect subsequent expected coping strategies. However,

when cognitive coping was used as subsequent expected coping strategies, it was negatively

correlated with T3NA and positively correlated with PSSE. On the other hand, using

emotional writing, a form of affective coping, in the initial stage was beneficial in a way that

it induced subsequent problem-focused coping. However, when affective coping was used as subsequent expected coping strategies, it was positively correlated with T3NA and negatively correlated with PSSE.

Mediation analyses demonstrated that initial coping, by influencing subsequent expected coping strategies, could affect people's experience of negative emotions and their PSSE. Results indicated that the initial use of emotional writing, versus cognitive writing, could make people more likely to choose problem-focused coping as a result, which were in turn related to lower negative affect and higher PSSE. The contribution of this study did not just confirm the effectiveness of using emotional writing, but it also provided a better understanding on how emotional writing could benefit people. Specifically, using emotional writing initially could induce a higher use of subsequent problem-focused coping, which might then result in a reduction on negative affect and an increase in PSSE.

The affect-level view of negative affect which was supported in Gross et al.'s (1998) research, was partially supported in this study, which meant that high N people would experience a higher baseline of negative affect than low N people. This also suggested that high N people need more help to reduce their negative emotions than low N people in everyday life, even in the absent of a significant stressor. On the other hand, the affective-reactivity view of negative affect which was supported in Gross et al.'s (1998) research was not supported in this study, which meant that no matter high N people or low N people, they had similar reactivity of negative emotions towards the same negative event in this study. Nevertheless, some research which was cited to support the relationship between neuroticism and affective reactions towards negative events did not provide accurate measure for pre-manipulation and post-manipulation negative affect (Larsen & Ketelaar, 1989, 1991). In other words, they might not lend support for the affective-reactivity view. Moreover, though Gross et al., (1998) had supported the affective-reactivity view, they admitted that

there was little empirical support for this view at that time and not much support for this view was found after their study.

Implications

The implications of this study are discussed as follow. First, how individuals dealt initially with the stressors may not have permanent and irreversible effects on negative emotions and PSSE, but rather, some interventions can be done as subsequent coping to help people lower their negative emotions and to increase their PSSE. Therefore, effective coping strategies can be taught to people who had coped ineffectively with stressors initially and professional help and guidance in coping may act as interventions to help these people. Second, keeping an emotional diary which has emotions written down every day may be beneficial for people to cope with stress in a way that it can induce subsequent problem-focused coping towards the stressors. Last, mental health professionals may help clients who are not willing to or not able to use problem-focused coping to tackle their stressors by giving them emotional writing as homework assignment. In this way, the use of emotional writing could induce subsequent problem-focused coping.

Limitation

The scenario used in the experiment would be better imagined if they would just hear the voice recording of the story without paper story, and the paper might be provided to them only for reference after the voice recording was presented. In this way, participants could imagine the scenario more vividly and the scenario might sound more real and personal to them. Moreover, a scenario that could elicit stronger negative emotions could be used so that the effectiveness of coping strategies would be more obvious. Furthermore, emotional writing was just one type of mild venting of emotions, and crying was another type of mild venting of emotions, but it was very hard and not ethical induce crying in an experiment. Thus, the use of emotional writing might not have a high generalizability for other mild forms of venting of

emotions. Also, as mentioned before, negative affect should also be measured after initial coping ideally to see the immediate effect of initial coping on negative affect, but to avoid memory effect as it had been measured three times in the experiment, the forth time was given up. In addition, as the scenario used in this study was a hypothetical one, it was impossible to measure the actual subsequent coping strategies, and subsequent expected coping strategies may not be the same as actual coping behaviors.

Further Study

Further study may require participants to recall their past real life stressful events to increase the external validity of the experiment. Also, further study may investigate the effect of the integration of both affective and cognitive writing and see how it compares with emotional writing or cognitive writing alone. In fact, Barclay and Skarlicki (2009) found that expressive writing with both emotions and thoughts written down showed higher psychological well-being and personal resolution, and less anger and retaliation intention, when compared to the groups that had only emotions or thoughts written down. However, the study was done in the organizational settings about injustice, and further study may investigate this finding in other settings. In addition, future study may also include some other forms of venting of emotions, rather than just emotional writing. Furthermore, neuroticism had been found to moderate the effect of positive thinking on negative affect in previous research (Ng & Diener, 2009), but it did not significantly moderate the effect of initial coping on subsequent expected coping strategies in this study. Further research may study the moderating effect of neuroticism on other coping strategies or other coping related variables. In addition, as Cheng, Lo, and Chio (2010) suggested that Chinese people tend to use more avoidant and emotion-focused coping than people in Western cultures; future research may study whether the effect of initial coping on subsequent expected coping strategies found in this study would be found in other cultures.

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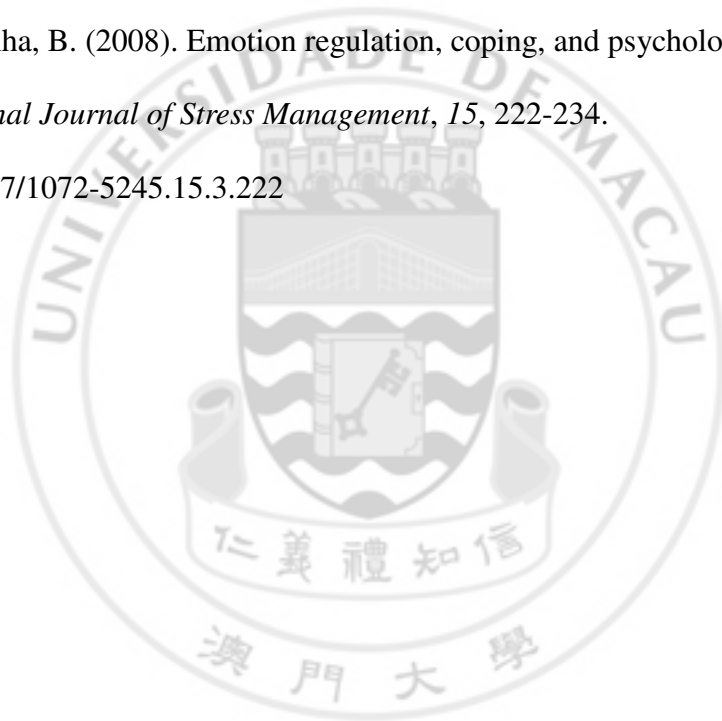
Figure 1. Conceptual model showing the effect of initial coping on subsequent expected coping strategies, the moderating effect of neuroticism and the indirect effect of initial coping on post-manipulation negative affect and PSSE.
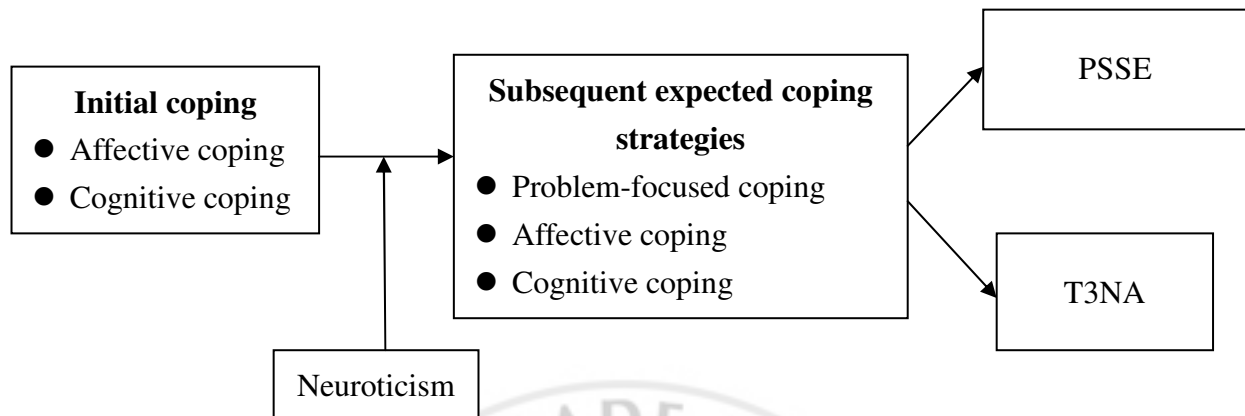
Note. PSSE = problem-solving self-efficacy.

Table 1

Descriptive Statistics and Correlation Matrix of Initial Coping, Neuroticism, Negative Affect, Subsequent Expected Coping Strategies, and PSSE

	M	SD	1	2	3	4	5	6	7	8	9	10
1. Initial coping[a]	—	0.50	—									
2. Neuroticism	2.86	0.45	-.03	—								
3. T1NA	1.88	0.85	.20	.45**	—							
4. T2NA	3.76	1.25	-.08	.12	.19	—						
5. T3NA	2.96	1.35	.01	.20	.28**	.68**	—					
6. PFC	3.91	0.36	-.22*	-.10	-.27**	-.03	-.32	—				
7. Affective coping	3.10	0.51	.14	.22*	.24*	.20	.23*	-.10	—			
8. Cognitive coping	3.80	0.58	-.05	-.15	-.18	-.12	-.26*	.47**	-.29**	—		
9. Planning	4.04	0.54	-.19	-.09	-.22	-.03	-.23*	.82**	-.27**	.47**	—	
10. Social support	4.00	0.53	.01	.08	-.13	-.02	-.25*	.54**	.19	.18	.10	—
11. Active coping	3.70	0.48	-.29**	-.20	-.21	-.01	-.19	.75**	-.15	.33**	.62**	-.01
12. Mild venting	3.70	1.01	.12	.07	.18	.09	.17	.02	.84**	-.15	-.08	.15
13. Strong venting	1.82	0.59	.13	.27**	.22*	.24*	.29**	-.37**	.50**	-.30**	-.43**	-.05
14. Venting	3.79	0.53	.03	.19	.11	.13	-.00	.08	.70**	-.21*	-.13	.31**
15. PSSE	3.33	0.59	.08	-.33**	-.20	-.13	-.18	.34**	-.40**	.42**	.44**	-.11
16. Gender[b]	—	0.47	-.15	-.10	-.15	-.09	-.17	.01	-.43**	.08	.09	-.11
17. Age	20.65	1.67	.02	.03	.05	-.02	.00	-.09	-.01	-.03	-.15	-.06
18. Year	2.51	1.36	.04	.05	.09	-.04	.00	-.18	.06	-.12	-.20	-.08

	M	SD	11	12	13	14	15	16	17	18
1. Initial coping[a]	—	0.50								
2. Neuroticism	2.86	0.45								
3. T1NA	1.88	0.85								
4.T2NA	3.76	1.25								
5. T3NA	2.96	1.35								
6. PFC	3.91	0.36								
7. Affective coping	3.10	0.51								
8. Cognitive coping	3.80	0.58								
9. Planning	4.04	0.54								
10. Social support	4.00	0.53								
11. Active coping	3.70	0.48	—							
12. Mild venting	3.70	1.01	-.03	—						
13. Strong venting	1.82	0.59	-.30**	.07	—					
14. Venting	3.79	0.53	-.03	.41**	.18	—				
15. PSSE	3.33	0.59	.40**	-.21*	-.44**	-.25*	—			
16. Gender[b]	—	0.47	.03	-.55**	-.02	-.16	.01	—		
17. Age	20.65	1.67	.03	-.03	.11	-.07	.04	.06	—	
18.Year	2.51	1.36	-.10	.06	.10	-.05	.02	-.02	.83**	—

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

Note. [a]Initial coping was coded as 0=emotional writing, 1=cognitive writing. [b]Gender was coded as 0=female, 1=male.

PFC = problem-focused coping; Social support = seeking social support for instrumental reasons; Mild venting = mild venting of emotions;

Strong venting = strong venting of emotions; Venting = venting of emotions; PSSE = problem-solving self-efficacy.

Figure 2. Mediation analysis of subsequent expected coping strategies by clusters as mediators and T3NA as outcome variable.
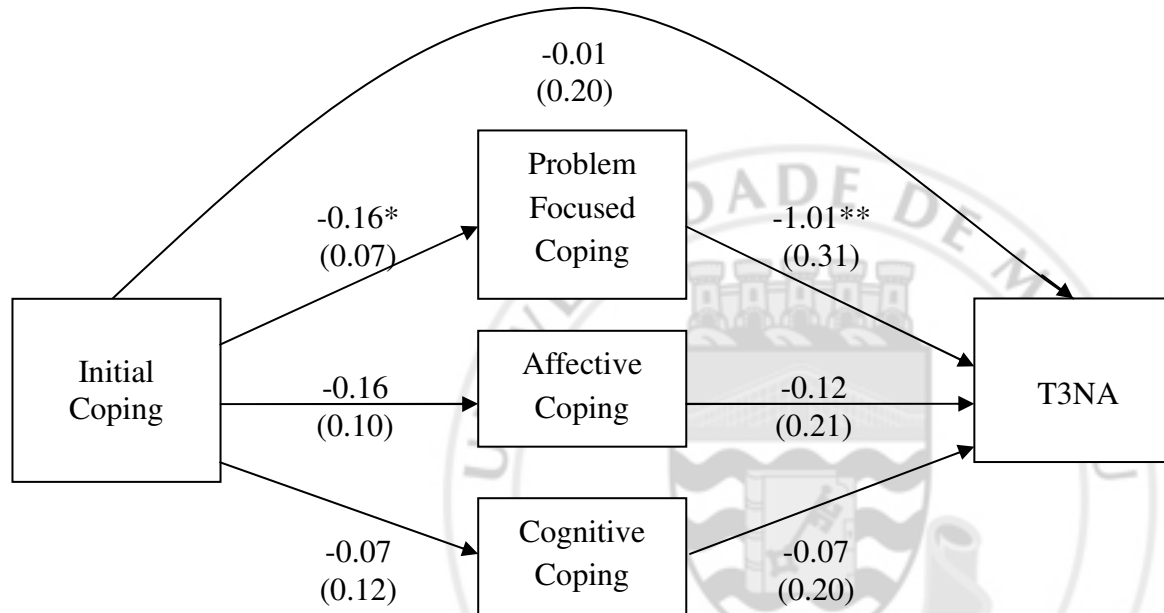
*p < .05. **p < .01

Note. Initial coping was coded as 0=emotional writing, 1=cognitive writing. Standard errors are shown in the parentheses.

Figure 3. Mediation analysis of subsequent expected coping strategies by clusters as mediators and PSSE as outcome variable.

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

Note. Initial coping was coded as 0=emotional writing, 1=cognitive writing. Standard errors are shown in the parentheses.

PSSE = problem-solving self-efficacy.

Figure 4. Mediation analysis of subsequent expected coping strategies as mediators and PSSE as outcome variable.

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

Note. Initial coping was coded as 0=emotional writing, 1=cognitive writing. Standard errors are shown in the parentheses.

Social support = seeking social support for instrumental reasons; Mild venting = mild venting of emotions; Strong venting = strong venting of emotions; Venting

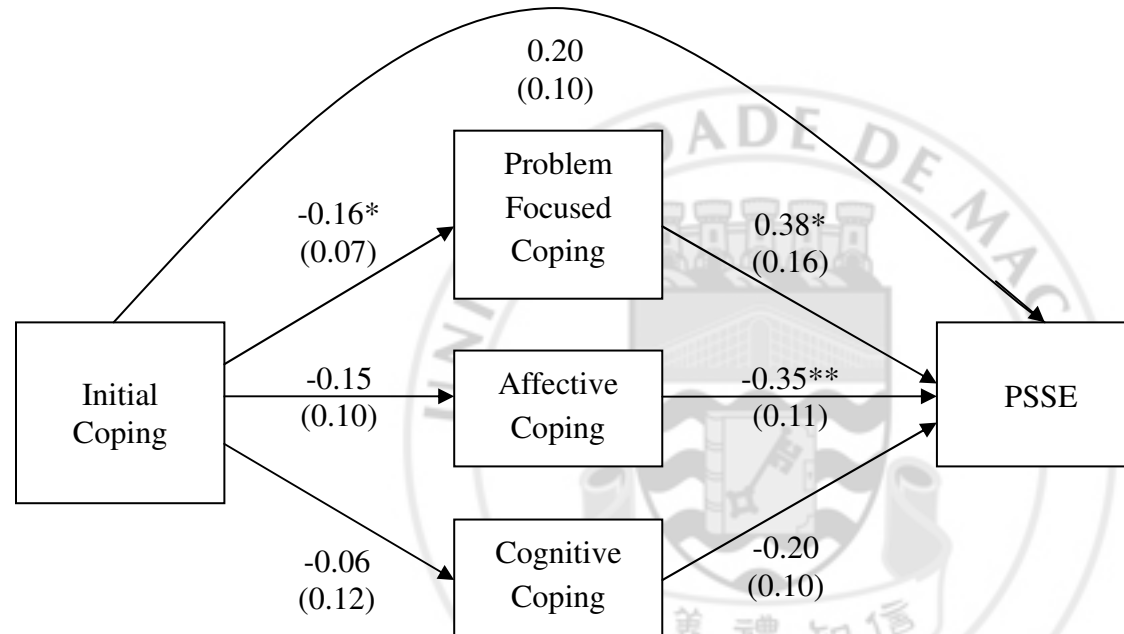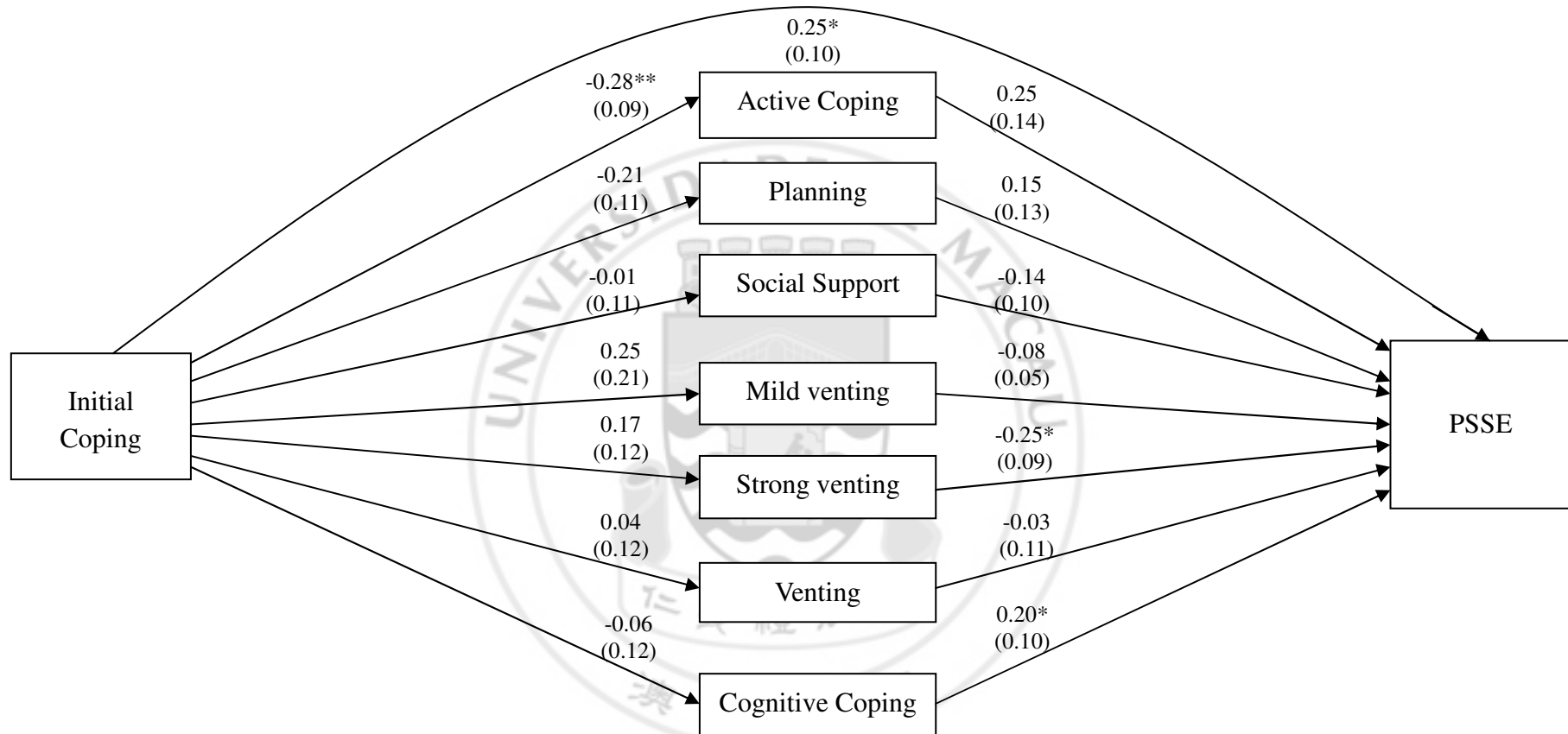= venting of emotions; PSSE = problem-solving self-efficacy.

Appendix

The Chinese Version of the Questionnaire

簡介

研究計劃：《壓力處理》

我誠意邀請閣下參與這次有關《壓力處理》的論文研究。處理壓力的方法有很多，而這項研究內容主要針對了解澳門大學生如何處理壓力及其方法的有效性。本人麥曉華小姐 (Ms. Grace Mak) 為是次論文研究員，而張樹輝博士 (Dr. Cheung Shu Fai) 為論文指導老師。

這個研究將會以實驗與問卷形式進行，時間約需四十分鐘。我將要求閣下聆聽及閱讀一個虛構故事，然後想像其情節及情緒，並填寫問卷，從而希望了解閣下處理壓力的方法。閣下參與是次計劃屬於自願性質。在參與過程中，閣下可隨時中斷研究，而此舉絕不會對閣下構成任何影響。閣下所提供之寶貴資料和意見將增添是次計劃之研究價值，更有助我們深入了解澳門大學生處理壓力的方法。

為了得到準確的資料，我謹希望閣下能提供最真誠的答案，認真地完成這次研究。我將會對所收集的資料進行詳細的分析，而所有資料只供學術研究，閣下所提供的個人資料將絕對保密。是次研究是不記名的，我保證在所有報告中不會使用任何導致你身份被披露的資料。我亦不會向其他澳門的學者講出你的資料。所以我可以保證在最後的資料分析時，閣下的資料將絕對被保密。在實驗開始之前，請細讀同意書，並交回給研究員。

由於是次研究的資料收集需要一段較長的時間，所以希望閣下在完成這次實驗和問卷後，不要和別人討論這次研究或透露是次研究的形式予其他人，以免影響其後的研究結果，希望閣下能合作。待整項研究的資料收集完畢後，我將會為閣下提供一個詳細的解說，所以在此希望閣下在實驗完畢後留下你的電郵地址，讓我可以在資料收集完成後，給你更詳細地解釋是次研究的目的。另外，如閣下對是次研究的結果感興趣，亦歡迎你主動和我聯絡，我非常樂意透過電郵與閣下分享研究結果。

感謝閣下能於百忙之中抽空參與是次實驗。如閣下對此項研究有任何疑問，請及早聯絡我或我的論文指導老師。

研究員：Grace Mak (麥曉華)　　　　　論文指導：Dr. Cheung Shu Fai (張樹輝博士)
社會科學及人文學院心理系四年級生　　社會科學及人文學院助理教授
澳門大學　　　　　　　　　　　　　　澳門大學

請先細讀同意書，若你同意自願參與此項研究的話，請把它填妥，交予研究員。

同意書

研究計劃：《壓力處理》

本人明白是次《壓力處理》計劃的研究內容以及性質；本人願意參與是次實驗並真誠提供資料。

本人明白在實驗中一切內容只供學術用途，絕對保密。所有關於本人的資料將以不記名形式出現在研究報告內。

本人清楚明白在任何情況下，有權撤回此授權書及拒絕參與此計劃。

本人有足夠的機會發問，並重申本人參與是次研究計劃屬自願性質。

如本人對此研究計劃存有任何疑問，本人將會主動聯絡此計劃之研究員。

你是否願意參加這項研究？

□是　　　　□否

請填寫以下問卷，圈出你的選擇

以下對你的描述有多準確？

		非常 不準確	不準確	不確定	準確	非常 準確
1	我對自己很滿意*	1	2	3	4	5
2	容易感到驚慌	1	2	3	4	5
3	常感到非常憂鬱	1	2	3	4	5
4	容易感到壓力	1	2	3	4	5
5	常感到憂鬱	1	2	3	4	5
6	在壓力下保持冷靜*	1	2	3	4	5
7	很少感到非常憤怒*	1	2	3	4	5
8	常對事物充滿疑惑	1	2	3	4	5
9	害怕最壞的事情發生	1	2	3	4	5
10	不容易受困擾*	1	2	3	4	5
11	不容易被激怒*	1	2	3	4	5
12	情緒大起大落	1	2	3	4	5
13	容易感到威脅	1	2	3	4	5
14	自我感覺良好*	1	2	3	4	5
15	很少失去鎮靜*	1	2	3	4	5
16	擔心很多事情	1	2	3	4	5
17	不喜歡自己	1	2	3	4	5
18	不容易感到挫敗*	1	2	3	4	5
19	很少感到憂鬱*	1	2	3	4	5
20	大部分時間是輕鬆的*	1	2	3	4	5

**這一刻你有多大程度有以下的情感：

		完全 沒有			有些			非常 強烈
1	放鬆**	1	2	3	4	5	6	7
2	快樂**	1	2	3	4	5	6	7
3	失望	1	2	3	4	5	6	7
4	憤怒	1	2	3	4	5	6	7
5	高興**	1	2	3	4	5	6	7
6	平靜**	1	2	3	4	5	6	7
7	焦慮	1	2	3	4	5	6	7
8	傷心	1	2	3	4	5	6	7

Note.*reversed item, **unprocessed item

請你聆聽並跟着聲音的節奏，細心閱讀以下的故事。在閱讀時<u>請你仔細地想像、感受故事中的情景，想像你是當中的主角</u>：

情景

　　你自小是一個很勤奮讀書的小孩子，由小學一年級開始，你總是全班第一。老師喜歡你，覺得你是個品學兼優、文靜的好學生。同學也喜歡你，因為你總能在學習上幫到他們，他們亦能向你分享心事。一直以來，你覺得你是世界上最幸福的人。你很滿足，因為同學、老師和父母都喜歡你，疼愛你。你有一個幸福的家庭，好的學習成績，和清晰的人生目標。一直以來，你也沒有經歷過失敗，一切都很順利，所以你亦很滿足。

　　你現在已是一個大學四年級的學生了，準備繼續升學讀碩士，身邊的人對你期望很大，覺得你的成就會很高，而他們的期望有時候會是壓力，有時候是動力，讓你開始追求完美，不許失敗。結果不少時候你都很辛苦，因為你覺得即使小小的失敗都會令身邊的人對你失望。你身邊的人都覺得你要考上碩士絕對不成問題，而你自己亦這麼認為。

　　煩惱和心痛的是最近你爸爸因肝病進了醫院。經醫生診斷後，情況不樂觀，需要在短時間內後進行手術。而且醫生認為這次手術風險也很高。一直以來，爸爸很愛你，你也很愛他。從來爸爸開心，你就會開心。你不願意看到爸爸病得辛苦，更不希望爸爸會因這病而離你而去。你知道他對你還有很高的期望，希望你可以考上好的大學讀碩士，將來能過很好的生活。

　　因為擔心爸爸的病情，最近你心情不太好；同時你亦努力忙於準備考試和面試，精神壓力很大。你選擇了報讀兩間最好的大學，而你良好的考試成績讓你順利得到這兩間大學的面試機會。你家人和朋友都為此感到驕傲，亦覺得你一定可以考得上。但可能因為你的性格比較文靜，不太多說話；亦可能因為受爸爸的病情困擾，你的面試表現一般，你開始擔心了。

　　今天，你收到了這兩間大學的信，你很緊張的拆開了你第一志願的學校，他們拒絕了你的申請。你很難過，因為你從來都未受過這種挫折，失望得難以形容，不知該怎樣面對。但你還是趕快拆第二志願學校的信，同樣地，他們也拒絕了你的申請。你的心情跌進了谷底，你覺得一切都很難接受，你覺得從前的努力都白費了。頓時間，天空變得很灰、很灰。你不知道該怎樣告訴媽媽這個難以接受的事實，因為她和身邊的人對你的期望和信心都太大了；你更不願告訴很快便要動手術的爸爸，你怕失去了學業之餘…還失去他。想到這裏，你獨自承受著這一切，你覺得很痛苦，你覺得這個事實…太沉…太重了......

請填寫以下問卷，圈出你的選擇

**這一刻你有多大程度有以下的情感：

		完全沒有			有些			非常強烈
1	焦慮	1	2	3	4	5	6	7
2	放鬆**	1	2	3	4	5	6	7
3	快樂**	1	2	3	4	5	6	7
4	傷心	1	2	3	4	5	6	7
5	平靜**	1	2	3	4	5	6	7
6	失望	1	2	3	4	5	6	7
7	高興**	1	2	3	4	5	6	7
8	憤怒	1	2	3	4	5	6	7

正面思想寫作

請身為故事主角的你，回顧這段經歷，嘗試仔細用下列４個模式思考那負面經歷，然後在紙上空白的地方寫出來。請把重點放在理性思考上，不要把重點放在情緒上。在你的文字中，表達你怎樣從下列４個思考模式看待這件事。每個人的思想和看法都不同，沒有對錯之分。請記著你是故事中的主角，你可以把你的思想連繫到故事中的父母、老師、朋友、其他人或純粹你自己。你所寫下的，除了你自己和研究人員，其他人是不會看到。而且這張紙是不記名的，你的身份並不會被披露。你可以用任何語言來進行寫作，只要用你覺得適合便可。不要擔心時間限制和文法，你不需要寫一篇完整的文章或用好的字句，你只需要誠實並不隱瞞地表達出你的想法。請就以下的４個思考模式開始進行寫作：

１·嘗試從這負面經歷中想出一些好處
２·嘗試從另一個角度去看這負面經歷，讓它看起來較正面
３·嘗試從這負面經歷中學習
４·嘗試視這負面經歷為個人成長的機會

Note. **unprocessed item

請填寫以下問卷，圈出你的選擇

**這一刻你有多大程度有以下的情感：

		完全沒有			有些			非常強烈
1	焦慮	1	2	3	4	5	6	7
2	放鬆**	1	2	3	4	5	6	7
3	快樂**	1	2	3	4	5	6	7
4	傷心	1	2	3	4	5	6	7
5	平靜**	1	2	3	4	5	6	7
6	失望	1	2	3	4	5	6	7
7	高興**	1	2	3	4	5	6	7
8	憤怒	1	2	3	4	5	6	7

情感寫作

請身為故事主角的你，寫下你最深的情感，即是那件事怎樣影響你的情緒？然後在紙上空白的地方寫出來。請在你的文字中，釋放你的感受和探索你內心最深處的情緒。寫下你對故事中那個負面經歷的感受，但請集中在情緒方面。情緒是沒有對錯之分。請記著你是故事中的主角。你可以把你的感受連繫到你的父母、老師、朋友、其他人或純粹你自己。你可以寫下一些你不想和別人分享的內心感受；你亦可以寫下一些你想和你故事中的父親、母親、老師、朋友等說的話。你所寫下的，除了你自己和研究人員，其他人是不會看到。而且這張紙是不記名的，你的身份並不會被披露。假設這文章是你和自己的對話，請你把重點放在你自己情緒的表達上。你可以用任何語言來進行寫作，只要用你覺得適合便可。不要擔心時間限制和文法，你不需要寫一篇完整的文章或用好的字句，你只需要誠實並不隱瞞地表達你的情感。

Note. **unprocessed item

請填寫以下問卷，圈出你的選擇

你是故事中的主角，面對着家人很大的期望；面對着學業上重大的困難；面對着爸爸不樂觀的情況，接下來你會···你有多同意以下的講法？

		非常不同意	不同意	不確定	同意	非常同意
1	我會嘗試得出一個策略要怎樣去做 (p)	1	2	3	4	5
2	我會透過音樂去抒發我的情緒，如音樂彈奏或歌唱 (mv)	1	2	3	4	5
3	我會破壞自己或別人的物品去發洩 (sv)	1	2	3	4	5
4	我會問有類似經歷的人他們曾怎樣做 (ss)	1	2	3	4	5
5	我會嘗試從另一個角度去看這事情，讓它看起來較正面 (c)	1	2	3	4	5
6	我會在心裡罵別人 (mv)	1	2	3	4	5
7	我會傷害自己 (sv)	1	2	3	4	5
8	我會打別人 (sv)	1	2	3	4	5
9	我會嘗試向別人拿建議要做甚麼 (ss)	1	2	3	4	5
10	我會思考我怎樣可以最好地處理我的問題 (p)	1	2	3	4	5
11	我會用直接的行動去解決我的問題 (a)	1	2	3	4	5
12	我會採取額外的行動去嘗試解決我的問題 (a)	1	2	3	4	5
13	我會努力地思考接下來要做甚麼 (p)	1	2	3	4	5
14	我會嘗試在這事情發生後作出個人成長 (c)	1	2	3	4	5
15	我會嘗試從這發生的事情中想出一些好處(c)	1	2	3	4	5
16	我會和別人傾談去找出更多關於這個處境 (ss)	1	2	3	4	5
17	我會不開心並把我的情感釋放出來 (v)	1	2	3	4	5
18	我會罵別人 (sv)	1	2	3	4	5
19	我會逐步來做我須要做的 (a)	1	2	3	4	5
20	我會很意識到我不開心 (v)	1	2	3	4	5
21	我會集中我的努力去為這事情做點事 (a)	1	2	3	4	5
22	我會做一個行動的計劃 (p)	1	2	3	4	5
23	我會把我的感覺釋放出來 (v)	1	2	3	4	5
24	我會哭出來 (mv)	1	2	3	4	5
25	我會把情緒透過文字釋放出來，如寫日記或寫作 (mv)	1	2	3	4	5
26	我會嘗試從這事情中學習 (c)	1	2	3	4	5
27	我會和那些可以做一些具體事情關於這問題的人傾談 (ss)	1	2	3	4	5

28	我會感到很悲痛而我發現我會表達很多這類情感（v)	1	2	3	4	5

Note. a = active coping; p = planning; ss = social support for instrumental reasons; v =

venting; mv = mild venting; sv = strong venting; c = cognitive coping.

請填寫以下問卷，圈出你的選擇

**這一刻你有多大程度有以下的情感：

		完全沒有			有些			非常強烈
1	憤怒	1	2	3	4	5	6	7
2	高興**	1	2	3	4	5	6	7
3	快樂**	1	2	3	4	5	6	7
4	放鬆**	1	2	3	4	5	6	7
5	失望	1	2	3	4	5	6	7
6	焦慮	1	2	3	4	5	6	7
7	傷心	1	2	3	4	5	6	7
8	平靜**	1	2	3	4	5	6	7

你是故事中的主角，現在對於處理你的問題，你有多同意以下的講法？

		非常不同意	不同意	不確定	同意	非常同意
1	我感覺能夠處理我的問題	1	2	3	4	5
2	不管做甚麼，我的問題好像越來越差*	1	2	3	4	5
3	我的問題對我來說太大和太難去解決*	1	2	3	4	5
4	對於我的問題，我不能做甚麼；他們超出了我的能力*	1	2	3	4	5
5	在處理我的問題時，我常常不能想到應做甚麼*	1	2	3	4	5
6	我的感覺可以讓我明白更多我的問題	1	2	3	4	5
7	我不清楚解決我的問題的步驟*	1	2	3	4	5
8	我大部分解決問題的計劃都不管用*	1	2	3	4	5

請填寫你的基本資料：

你的性別： □ 女 □ 男
你的年齡： ＿＿＿＿＿歲
你的年級： ＿＿＿＿
你的專業： ＿＿＿＿

Note. *reversed item, **unprocessed item

《壓力處理》調查──大學生問卷研究簡介

感謝你騰出寶貴的時間參與此項研究。你的參與將有助我們瞭解澳門大學生壓力處理的方法及其有效性。

背景

每個人每天都面對著不同的壓力，壓力處理是我們每天都在做的事。人們處理壓力的方法有很多，沒有一種處理壓力的方法是絕對的好或是絕對的壞；然而，根據壓力的種類和大小及人們不同的性格特質，處理壓力方法的有效性亦會相對被影響。

本研究的目標及方法

為了進一步了解澳門大學生的壓力處理，是次研究以澳門大學生為研究對象。本研究透過實驗和問卷，了解大學生在面對大壓力的時候，會採用甚麼方法去處理，而這些處理方法對不同的學生在效能上有甚麼分別。

由於是次研究的資料收集需要一段較長的時間，所以希望閣下在完成這次實驗和問卷後，不要和別人討論這次研究或洩漏是次研究的形式予其他人，以免影響其後的研究結果，希望閣下能合作。你的合作會有助提高資料的有效性，從而提高研究結果對學生的幫助。

如果你因為這次研究實驗而感到不安，你可以聯絡澳門大學學生事務處學生發展及輔導服務，就你的經驗尋求協助。(注意：電郵及電話謹為補充資料，本調查與學生事務處及學生發展及輔導服務沒有任何關係。)

如欲得知進一步的資料，可參考以下文獻，或聯絡 Grace Mak。

Carver, C., Scheier, M., & Weintraub, J. (1989). Assessing coping strategies: A theoretically

based approach. *Journal of Personality and Social Psychology*, *56*, 267-283. doi:

10.1037/0022-3514.56.2.267

********再一次感謝你的參與********