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Personality, Coping and Stress Among University Students

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Abstract: The study examined the relationship between personality, coping strategies, and level of psychological stress. Participants consisted of 148 university students from a private university college in Kuala Lumpur, Malaysia. Leonard Personality Inventory (LPI), Perceived Stress Scale (PSS) and COPE Inventory were used. The results revealed that participants who have high analytical personality dimension were more likely to use problem-focused coping. Those with high relational and low openness personality dimension were more likely to use socially supported coping strategies. Contrary to expectation, level of psychological stress was not influenced by personality. However, higher level of psychological stress was related to avoidant and socially supported coping strategies. Findings may be beneficial to mental health professionals in helping university students to manage their stress.

Keywords: Personality, Coping Strategies, Psychological Stress, University Students

1. Introduction

Attending university and embarking upon an academic career is a pleasurable and exciting experience for many people. For many students, however, the transition to university and pursuing academic career may prove far more stressful than exciting [1, 2]. University students are going through a transition period from adolescence to adulthood filled with many challenges in life due to various changes and choices that they have to make in order to get academic qualification.

Various past researches have shown that stress is prevalent among students of higher learning institutions [3 – 6]. Some findings indicated that one out of four college students reported experiencing symptoms of depression, anxiety or stress [7]. It was reported that stressors such as leaving home for the first time, writing academic papers, examinations and other requirements of academia are experienced as immensely stressful by many students [8, 6]. For others, the sudden transition of the use of English language as a medium of instruction can also be a source of stress for students [9]. These stressors can cause negative outcomes such as elevated levels of anxiety and depression, frequent incidents of illness, poor academic performance, or departure from academia [10].

In view of the various challenges faced by university students, their ability to cope effectively is crucial. Understanding how personality and coping are related to psychological stress is important for health professionals. The current study aims to determine how personality, coping strategies and level of psychological stress are related to each other.

1.1. Personality and Coping

An individual may have preference for certain types of coping when facing a stressful situation that is closely linked to their personal characteristics or personality traits. For instance, Li [11] showed that the trait of resilience was a significant predictor of active coping in stressful situations. Many previous studies on the relationship between personality dimensions and coping styles have found that extraversion was positively correlated to problem-focused coping style [12], active coping strategies [13] and mature coping styles such as problem solving and help seeking [14]. Conscientiousness was found to be positively correlated to problem-focused coping style [12, 15]. Neuroticism and psychoticism were found to be linked to immature coping styles such as self-blame, fantasizing and avoidance [14]. Most of these studies used big five personality factors to examine the relationship between personality and coping strategies and found significant correlations between the two

variables. The present study would like to use Leonard Personality Inventory which is based on a combination of four Greek temperaments and Big Five model [16] to examine the relationship between personality and coping strategies in the Malaysian context, which lack research studies at the moment. It is hypothesized that there is a significant relationship between personality and four types of coping strategies used by university students.

1.2. Personality and Psychological Stress

In recent years, a growing number of researchers have put a lot of effort in identifying the individual characteristics that influence the relationship between stimuli and stress reactions, and some empirical data confirm the idea that personality is an important factor in identifying, responding and approaching stress events as shown in the literature that follows. Vollrath [17] suggested that if personality plays a role in the stress experience, it somehow must "translate" into stressful experiences, and dispositions must, therefore, relate to dynamics of appraisal and coping. Dumitru and Cozman [18] found a significant correlation between several personality factors (social presence, empathy, independence, good impression, intellectual efficiency, psychological intuition, work orientation) and vulnerability to stress in their study conducted for 34 psychiatric nurses. Kaur, Chodagiri and Reddi [19] reported a statistically significant association between personality (neuroticism, psychoticism, and extraversion), psychological distress and coping strategies (negative distraction and denial/blame) in their study consisted of 150 police persons.

Given the extant literature involving non-students sample and big five personality, the present study will examine whether personality dimensions measured by a different personality inventory are related to the level of stress experienced by university students. A similar correlation is expected in this study involving university students and thus it is hypothesized that there is a significant relationship between personality and level of psychological stress.

1.3. Coping and Psychological Stress

Folkman and Lazarus [20] viewed coping as a dynamic process and differentiated various coping styles into two categories: problem-focused coping and emotion-focused coping. Carver et al [21] noted these two coping styles and expanded coping strategies to form COPE Inventory which includes other dimensions of coping as they viewed coping to be a multidimensional construct [21]. The dimensionality of the COPE Inventory was further evaluated by Litman [22] into self-sufficient problem-focused, Self-sufficient emotion-focused, avoidant-coping and socially-supported coping. These dimensions were used in the present study to examine the relationship between coping and psychological stress.

Empirical evidence suggests that proper coping strategies may play an important role in the way students manage stressful academic events [23, 14,7]. The ability of students to cope with challenges in life can help to reduce the level of psychological stress. On the contrary, inability to cope with excessive amount of stress can have a devastating effect on students mentally, physically and psychologically [7]. Previous study has shown that the use of maladaptive coping strategies such as self-blaming, denial and giving up could predict higher levels of depression, anxiety and stress among students [7].

A similar result was reported by Brougham, Zail, Mendoza, & Miller [24], who investigated the relationship between sources of stress and coping strategies among 166 college students and found that the levels of daily hassles was significantly correlated with the use of avoidance and self-punishment for both men and women. Struthers, Perry and Menec [23] used structural equation analysis to confirm that academic stress experienced by students can be mediated by students' coping style.

Some researchers used coping profiles of students rather than using discrete coping style of students to investigate the relationship between coping and stress. In a study done by Eisenbarth [25], coping strategies were categorized into two groups. One group is named adaptive coping comprised of those who use high problem- and emotion-focused coping, combined with moderate seeking of social support and low avoidance coping. The other group is named maladaptive coping comprised of those who use high avoidance coping, moderate support seeking and low levels of problem- and emotion-focused coping. It was found that adaptive coping profile was related to those reported fewer symptoms of psychological distress whereas maladaptive coping profile was related to those reported the highest level of psychological distress. The finding suggested that use of avoidance coping is related to increased psychological distress and may become problematic when it is combined with low usage of other coping strategies such as problem- and emotion-focused strategies [25].

Flowing from these literature reviews, the present study hypothesized that there is a significant relationship between coping strategies and level of psychological stress among students.

2. Methods

2.1. Participants and Procedures

Participants were 148 diploma and bachelor degree students from a University College located in Kuala Lumpur, Malaysia. They consisted of 45 males (30.4%) and 103 females (69.6%). The age range of participants was from 18 to 27 years (M_{age}=20.26, SD=1.33). Majority of participants identified themselves as Chinese (n = 140) and the balance (n = 8) from other ethnic groups.

Students were asked to volunteer their participation with no incentives provided. Leonard Personality Inventory (LPI) was administered online at www.leonard.com.my whereas Perceived Stress Scale and the Cope Inventory were administered using paper and pen in the campus.

2.2. Measurements

The Leonard Personality Inventory (LPI) was developed based on one of the four major approaches of personality: personality structure, psychoanalytic theory, transactional analysis, and developmental theories [16]. The LPI focuses on one aspect of the structural approach in the understanding of personality by categorizing personality into 5 main dimensions: Openness, Neutral, Analytical, Relational, and Decisive. The LPI consists of 100 items with each item rated on a 5-point scale (1=disagree strongly to 5=agree strong). Cronbach's alpha coefficient for the LPI ranged from .71 to .80 [26].

The Perceived Stress Scale (PSS) is a psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items are designed to gauge how unpredictable, uncontrollable, and overloaded participants find in their lives in a general nature [27]. The PSS used in this study consists of 10 items asking participants to rate their feelings and thoughts during the last month on a 5-point Likert scale ranging from 0 (Never) to 4 (Very often). PSS scores are obtained by reversing responses (0=4, 1=3, 2=2) to the four positively stated items (items 4,5,7 and 8) and then summing across all scale items. Higher scores in PSS indicate higher levels of perceived stress. Cronbach's alpha coefficient for the internal reliability of the PSS was .78 [27].

The COPE Inventory was developed by Carver, Scheier, and Weintraub [21]. The COPE Inventory is a fifteen 4-item scales self-report instrument designed to measure different problem and emotion focused coping methods. The 15 subscales of COPE can be rationally grouped into four major categories, namely, the problem-focused strategies, which include Planning, Active Coping, Suppression of Competing Activities; the emotion-focused strategies, which include Positive Reinterpretation, Acceptance, Religious Coping, Humor, and Restraint; socially-supported strategies, which include Emotional Social Support, Instrumental Social Support, and Venting of Emotions; and avoidant-coping strategies, which include Behavioral Disengagement, Denial, Substance Use, and Mental Disengagement [22]. The COPE Inventory uses a 4-point scale with response options ranging from 1 (I usually donn't do this at all) to 4 (I usually do this a lot). The Alpha coefficient for COPE was .73 [28]. The alpha for this study was .79 for self-sufficient problem-focused coping, .70 for avoidant-coping, .84 for socially-supported, and .70 for self-sufficient emotion focused coping.

3. Results

Summary of inter-correlations and descriptive statistics for personality, coping strategies and psychological stress were reported in Table 1.

H1 predicted a significant relationship between personality and coping strategies used by students. Analyses of bivariate correlations between five personality dimensions and four types of coping strategies showed that the hypothesis was partially supported. Results revealed that problem-focused coping strategies were significantly related to the personality dimension of openness, r = .231, p <.01; neutral, r = .231, p <.01; analytical, r = .323, p <.01 and decisiveness, r = .263, p <.01. The relational personality dimension was found to be significantly related to socially-supported coping strategies, r = .236, p <.01. Results also showed a significant relationship between emotionally-supported coping strategies with the neutral personality dimension, r = .162, p<.05 and relational personality dimension, r = .207, p <.05. None of the personality dimensions was found to be significantly related to avoidant-coping strategies.

Additional analysis using multiple regression showed that personality accounted for a significant 14.5% of the variability in problem-focused coping strategies, Adjusted R^2= .145, F (5,142) = 5.99, p <.001. Analytical personality dimension received the strongest weight in the model followed by decisive and openness (Table 2). By Cohen's [27] conventions, a combined effect of this magnitude can be considered "medium" (f^2=.211). In addition, personality was also a significantly predictor for socially-supported coping strategies, accounting for 7.3% of the variance in socially-supported coping strategies, Adjusted R^2= .073, F (5,142) = 3.33, p=.007. Relational personality dimension received the strongest weight in the model followed by openness. By Cohen's [27] conventions, a combined effect of this magnitude can be considered "small" (f^2=.117).

Table 1. *Correlation Matrix between Personality, Coping Strategies and Level of Psychological Stress.*

	1	2	3	4	5	6	7	8	9	10
Openness	-									
Neutral	.109	-								
Analytical	.063	.481**	-							
Relational	.309**	.153	-.088	-						
Decisive	.429**	-.054	.208*	.429**	-					
Problem Focus	.231**	.231**	.323**	.106	.263**	-				
Avoidant Coping	-.146	-.061	-.095	-.114	-.099	-.094	-			
Socially Supported	-.120	.096	.033	.236**	.020	.125	.193*	-		
Emotion Supported	.078	.162*	.111	.207*	.147	.308**	.153	.228**	-	
Perceived Stress	-.148	.078	.065	-.106	-.089	.009	.238**	.194*	.074	-

Note: N=148, *p < .05 level (2 tailed), **p < .01 level (2 tailed)

Table 2. Personality Dimensions and Coping Strategies.

Variable	Coping Strategies							
	Problem-Focused		Avoidant-Coping		Socially-Supported		Emotion-Supported	
	r	β	r	β	r	β	r	β
Openness	.231**	.134	-.146	-.119	-.120	-.210*	.078	-.025
Neutral	.231**	.120	-.061	.021*	.096	.038	.162*	.118
Analytical	.323**	.221*	-.095	-.111	.033	.063	.111	.053
Relational	.106	-.007	-.114	-.098	.236**	.316*	.207*	.116
Decisive	.263**	.170	-.099	.019	.020	-.037	.147	.082
Adjusted R^2	.145*		.002		.073*		.036	

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

H2 predicted a significant relationship between personality and level of psychological stress. A bivariate correlation was used to assess the linear relationship between personality and level of psychological stress. H2 was not supported. No statistical significant relationship was found between each of the five personality dimensions and level of psychological stress.

H3 predicted a significant relationship between coping strategies and level of psychological stress. H3 was supported for avoidant coping and socially supported coping strategies. Results showed a significant relationship between avoidant, socially-supported coping strategies and level of psychological stress among students with r= .238, p<.01 and r =.194, p<.05 respectively (Table 3). Additional multiple regression analysis showed that coping strategies accounted for a significant 5.4% of the variability in the students' level of psychological stress, Adjusted R^2= .054, F (4,143) = 3.08, p<.05. Avoidant coping strategies received the strongest weight in the model followed by socially-supported strategies. By Cohen's [27] conventions, a combined effect of this magnitude can be considered "small" (f^2=.086).

Table 3. Coping Strategies and Level of Psychological Stress.

Variable	Perceived Psychological Stress	
	r	β
Problem-Focused	.009	.008
Avoidant Coping	.238**	.209*
Socially Supported	.194*	.151
Emotion Support	.074	.005
Adjusted R^2	.054*	

*p<.05, **P<.01

4. Discussion

The results of the current study provide some support for the hypothesis that predicted a significant relationship between personality and coping strategies used by students. This finding is consistent with past studies in relation to the correlations between personality dimensions and stress coping styles [12, 13]. The bivariate analysis indicates that individuals with high openness, neutral, analytical, and decisive personality dimension are more likely to use problem-focused coping. However, in multivariate analysis, only analytical personality dimension has significant effect on problem-focused coping strategies. Those who have high analytical personality dimensions naturally use more logical reasoning and prefer to follow procedures and be precise [16], therefore it is more likely for those individuals to use problem-focused coping that involves planning, active coping, and suppression of competing activities. The finding also indicates that those with high relational personality dimension and low openness personality dimension are more likely to use socially supported coping strategies. This is expected because those who have high scores in relational personality dimension are naturally more talkative. People who enjoy talking to others and socializing with others are more likely to use socially supported coping strategies. On the contrary, those who are high in openness personality dimension are less likely to use socially supported coping strategies because they prefer to do things different from others, invent their own new ideas and may be easily misunderstood by others [16]. Although neutral personality dimension is significantly correlated with emotion-focused coping strategies, the correlation was very weak and thus not able to predict the use of emotion-focused coping strategies.

In contradiction to what is expected, the present finding shows no significant relationship between various personality dimensions and level of psychological stress. Although the correlations were not statistically significant, the descriptive statistics showed that those who have high openness and high relational personality dimension scores tend to have lower level of psychological stress. There is a need for further research to explore this relationship between personality and level of psychological stress as the finding was contradictory to the previous finding [19]. One possibility for this non-significant correlation could be due to the type of instrument used to measure stress and the buffering effect of coping strategies used. PSS measures the perceived degree to which situations or environmental demands exceed abilities to cope and thus appraised as stressful [29]. The result seems to indicate that what is being perceived as stressful is not influenced by the kind of personality that the university students have but influenced by other variables such as coping strategies used by them as discussed later.

This finding reveals that the level of psychological stress is significantly related to avoidant and socially supported coping strategies. It seems to indicate that whether a person experiences stress or not is not solely dependent on the personality of a person as shown in the earlier result of this study, but on the ability of the person to cope with the stressful

situation. This finding supports previous studies suggesting the important role of coping strategies in managing stress among students [7, 14]. The impact of stress experienced by an individual can be predicted by the coping strategies used by individuals to cope with stress. It is important to understand the coping behaviors of students and how these coping behaviors influence the level of psychological stress in order to help students cope with their stress. If they use adaptive coping strategies, the chances of helping them to reduce stress will be greater.

The present finding seems to indicate that releasing of emotion and seeking social support from people around are not enough to help students cope with their stress effectively. Commonly, it is thought that when students experience stress, their friends, family members and significant others can provide instrumental and emotional social support [24]. Although assistance from these sources is considered as valuable sources that can positively affect individuals' well-being [30, 24], this view is not supported in this research finding. There is a possibility that students are not satisfied with the social and emotional support given [31], and those people who provide such support maybe under tremendous stress themselves too, and may suggest inappropriate coping strategies such as avoidance coping. Thus, it is crucial for students who are experiencing stress to seek professional help and not to depend on themselves or people around them.

Based on the findings, it is helpful for students in managing stress if they reduce the use of avoidant coping strategies especially behavioral disengagement and denial as well as use of socially supported coping strategies especially venting of emotions. This finding is consistent with Carver, Scheier, and Weintraub [21] that coping responses to stress may be maladaptive and the tendency to focus on venting of stressful emotion may be less useful to resolve stress. To show too much of emotions may not be a favorable way of coping with stress. It is important to note that the most frequently used coping strategies are positive reinterpretation and growth, followed by planning and then acceptance. The findings show that the more university students use these coping strategies, the lower will be their level of psychological stress.

This finding provides an important input for mental health practitioners in designing effective coping strategies, therapeutic interventions and workshops for managing psychological stress among university students. It is good to assess the coping styles of students while helping students to cope with their psychological stress as the findings indicate that more frequent use of avoidant and socially supported coping strategies predict higher level of psychological stress.

There are a few limitations to the present study which must be taken into consideration in the interpretation of results. Firstly, the current findings are based on self-reported data, which may not reflect the actual level of psychological stress among students. Some students may be reluctant to report excessive amount of stress experienced by them. Secondly, the use of cross-sectional design in this study has its limitation in explaining the cause and effect of using certain coping strategies. It will be good in future to consider using a longitudinal study to explain how certain coping strategies can have an effect on the level of psychological stress while controlling other variables that could influence the level of psychological stress. Thirdly, the sample used in this study is homogeneous in terms of ethnicity which limits the ability to generalize the results. A comparison of students from different cultural background can help to extend the generalization of the study.

In conclusion, the findings of this study showed that personality was related to coping strategies employed by university students. The level of psychological stress experienced by students was not dependent on the personality of students but on the coping strategies used to cope with the stressful situation.

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