

STRESS AND LIFE SATISFACTION AMONG MEDICAL STUDENTS IN MYANMAR: THE MEDIATING ROLE OF COPING STYLES

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Abstract

This study investigate the direct effect of perceived stress on life satisfaction and the indirect effect between stress and life satisfaction mediated by the three different coping styles; problem-focused coping, emotional-focused coping, the avoidance focused coping. The participants were medical students from first year to final year from two medical universities in Yangon, Myanmar. The quantitative research employed path analysis using survey questionnaires of 216 students obtain via convenient sampling. The path analysis result showed that the relationship between problem-focused coping and life satisfaction is highly significant. The result also found that the stress inversely predicts the emotional focused coping. This research finding may provide some reference for future research in the area of stress and wellness of medical students.

Keywords: Stress, life satisfaction, coping styles

Introduction

Stress among medical students during their academic years often deteriorates their physical and psychological well-being as well as affects their academic performance (Misra & McKean, 2000). Medical students have to study tremendous facts in the program, devote most of their time on their studies, go through various learning methods from lectures to practical and undertake supervised clinical practice for many years in order to become competent physicians.

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The purpose of medical training is to produce efficient, knowledgeable, and skillful graduates who can provide quality health care in the society (Van Wyk, Naidoo, Moodley, & Higgins-Opitz, 2016). Therefore, there is no doubt that the *life satisfaction* of medical students is important and needs to be addressed.

As in the case of most medical students across the globe, medical students in Myanmar encounter a number of stressors from academic demands to high expectations from family and society. In Myanmar, as elsewhere, the nature of the pressure for high academic achievement in medical school is exerted within a cultural and social context. It is related to people's perception of education in a society, and to the demands and availability of educational opportunities. Medical students in Myanmar have to face a number of academic pressures such as exams, assignments, and tutorials as in other Universities. Many parents expect their children to be a good doctor in the future; hence, their children have to study hard to attain their educational goals. More often than not, it becomes a must for younger students to choose medical studies in compliance with their parents' wishes. Not surprisingly, children cannot go against their parents' expectations since parents provide the main financial support for their children's education, according to the Global New Light of Myanmar – one of the country's leading newspapers.

It is this researcher's observation that, being from Myanmar herself, many medical students in Myanmar have to grapple with the feeling of being bulldozed into taking a course they do not really like. Thus, it is understandable that adding up academic pressures and family and social expectations might escalate the level of stress among medical students.

Research Objective

The current study attempted to examine the direct effect of level of stress on the level of life satisfaction among medical students from, Myanmar as well as the indirect effect of stress on their life satisfaction, being mediated by their coping styles, namely: problem-focused, emotion-focused, and avoidance-focused coping.

Literature Review

The conceptual framework of this study is based on the transactional model. According to the transactional model (Lazarus & Folkman, 1984), stress is a relationship between the person and the environment that is appraised a potentially endangering to one's well-being'. (Lazarus and Folkman, 1984) explained stress as not just the stressors from external but the interpretation of the person and it is a transaction between the person and the environment. In the processes, there are three stages of cognitive appraisal; primary appraisal and secondary appraisal and reappraisal. The primary appraisal is when an individual evaluates the situation as

harm or loss, damage or challenge. If the event is appraised as harm or damaged, the individual explores the resources to reduce or to alleviate the stressful experience which is called secondary appraisal. The individual appraised an event as stressful, either problem-focused or emotional focused coping are usually applied (Carver, Scheier, & Weintraub, 1989; Lazarus & Folkman, 1984). Individual judges based on the information they received from the environment or the personal interpretation. The person evaluates the result or consequence of the coping strategies is called reappraisal (Lazarus & Folkman, 1984). According to the theory, coping is a constant changing cognitive and behavioral efforts to manage specific external or/and internal situations deemed to exceed or overwhelm the individual's resources. The authors also argue that the problem-focused coping has a positive impact on the well-being and the emotional focused and avoidance coping has a negative impact on the well-being (Carver, Scheier, & Weintraub, 1989). The transactional model explains the variables of this study since this study focus on the effect of stress on the wellbeing as well as the coping styles of medical students. When people encounter stressful situation, they find ways to reduce it or remove it. The role of coping patterns has taken part prominently in many studies related to stress, over the years (e.g., Carver, 1997; Lazarus & Folkman, 1984; Matheny, Aycok, Curlette, & Junker; 1993; Somerfield & McRae, 2000). Stress research has established the importance of coping among students and has added the benefits of using effective strategies (e.g., Lazarus & Folkman, 1984; Nelson, Dell'Oliver, Koch, & Buckler, 2001). Although stressful experience leads to poor well-being, according to the transactional model, effective coping strategies can increase well-being.

While a number of studies suggest that the concept of well-being is paid less attention in the past (e.g., Dyrbye, Thomas, & Shanafelt, 2006; Lupo & Strous, 2011), a thorough review of the literature reveals a large volume of theoretical perspectives on life satisfaction as a component of subjective well-being. Past researchers described life satisfaction as how much a person positively evaluates the overall quality of his or her life; in effect, it is the global assessment of a person's quality of life, according to his or her own chosen criteria (Veenhoven, 1996; Andrew & Withey, 1976; Shi, Wang, Bian, & Wang, 2015). It is one of three components of subjective well-being or happiness. The other components are positive and negative affect which consist of pleasant and unpleasant emotions (Diener & Suh, 1997). By the same token, life satisfaction which is more cognitive in nature is distinguished from the affective components of well-being (Diener & Seligman, 2004; Lucas, Diener, and Suh 1996). Life satisfaction also refers to the judgment individuals give their own experience and criteria on quality of life. It is how people perceive situations in life according to their norms and the degree of achievement which they receive from the norms they set. Therefore, it is a fully conscious cognitive decision made by individuals' own judgments on their lives (Shin & Johnson, 1978). There could be

other factors which influence satisfaction in life such as success and health; people rate differently according to how they prioritize those factors in their lives (Diener et al., 1985). In this study, the effect of stress on the life satisfaction of medical students would be examined and the meditation effect of coping styles on the life satisfaction.

Coping

There have been many definitions of coping offered through the years. Lazarus and Folkman (1984) described coping as constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person. Coping had also been described as the process of interacting with the environment in that individuals act a certain way and receive feedback from their surroundings. If the feedback were to be positively reinforcing, individuals would repeat their behaviors; if individuals did not like the feedback (i.e., punishment), they would alter their behaviors (Cohen, 1978, as cited in Cox, 2007).

Coping styles refer to ways in which individuals appropriate coping resources and strategies to protect themselves from the harmful effects of stressors (Aycock, 2011). It is crucial for people to use coping mechanisms in their daily lives as the healthy style of coping develops problem-solving skills and ways of dealing with intrapersonal and interpersonal conflicts. Moreover, by using coping mechanisms, people can reduce their physical, emotional, and psychological stressful situations (Snyder & Dinoff, 1999).

As people encounter stress in different forms, the coping they choose for each situation of their life depends on how they appraise stress (Nonis, Hudson, Logan, & Ford, 1998). People use many different ways of coping to prevent themselves from experiencing the negative effect of stressors. Effective coping can help people to reduce stress and overcome the dangerous situation. The individual who has healthy coping skills can handle stressful situations and prevent undesirable results. On the other hand, individuals with poor coping skill would develop emotional distress and behavior problems (Weisman, 1978).

Lazarus and Folkman (1984) broke down coping mechanisms into three categories: problem-focused coping style, emotion-focused coping style, and avoidance coping. Practically mirroring the latter statement, Endler and Parker (1994), a decade later, proposed that typical coping styles include task/problem-focused, emotion-focused, and avoidance-focused strategies.

Stress and life satisfaction

Significant negative relationship between stress and well-being had been found in many studies involving medical students as well as those in other fields of study (Karademas & Kalantzi-Azizi, 2004; Deniz & Engin, 2006). More recently, it was reported that the relationship between perceived stress and satisfaction with life is negatively correlated among medical students in China (Shi et al., 2015). Moreover,

stressful experiences during university studies may affect students' future career if they do not learn to employ healthy coping habits (Nicholl & Timmins, 2005). Many other studies support the aforementioned findings such as when stress and life satisfaction was examined among Turkish college students, stress and life satisfaction were found to be negatively correlated (Kaya, Tansey, Melekoglu, & Cakiroglu, 2015).

Coping with stress

In a cross-sectional study of stress and coping strategies among medical residents in Saudi Arabia, the results showed that the participants' level of stress is negatively correlated with problem-focused coping; that is, when residents have low levels of stress, problem-focused coping is mostly employed. On the other hand, there is a positive correlation between the level of stress and emotion-focused coping: that is, the medical residents employed more emotion-focused coping when their stress level is high (Alosaimi, Almufleh, Kazim, & Aladwani, 2015). Some emotion-focused strategies that focus on negative emotions are harmful as individuals using them tend to focus on their negative emotions rather than making efforts to resolve them. Pouring out emotions is deemed ineffective as it leads to considerable increase in overall stress which may negatively impact on academic performance, relationships, personal issues, and professional identity (Billings & Moos, 1981; Bouteyre, Maurel, & Bernaud, 2007). Medical students use avoidance coping in order to relieve academic pressure and overall stress. Avoidance coping involves strategies such as denying reality, distraction, withdrawal, and substance abuse. This style has poor outcomes and leads to increased distress (Madhyastha et al., 2014). Self-distraction which is maladaptive and a form of avoidance coping seems effective only in the short-term, and leads to increased stress after a period of time (Stewart et al., 1999). Aspinwall and Taylor (1997) found that coping has significant effects on health and well-being conditions. Depending on the coping strategy employed by an individual, life satisfaction would be affected either positively or negatively. The following section presents empirical evidence of associations between specific coping styles and life satisfaction or psychological well-being.

Problem-focused coping and life satisfaction: The benefits of problem-focused coping on life satisfaction or well-being have long been investigated. Lazarus and Folkman (1984) and Carver et al. (1989) have asserted the positive influence of problem-focused coping on well-being. This result is still evident in other study that problem-focused coping has significant positive effect on individuals' daily lives and in maintaining life satisfaction (Gustems-Carnicer & Calderon, 2013). *Emotion-focused coping and life satisfaction:* While the problem-focused coping style has been shown to have a positive impact on life satisfaction, on the other hand, the emotion-focused coping style has been found to have a negative effect on well-being

(Loukzadeh & Mazloom Bafrooi, 2013). A study by Kjeldstadli et al. (2006) found that medical students who use less emotion-focused coping style have higher levels of life satisfaction. Other studies which similarly reported the positive impact of problem-focused coping on well-being and the negative effects of emotion-focused coping included that of Mayordomo-Rodriguez et al. (2015).

According to Lazarus (2006), some choices of strategies can either be emotion-focused or problem-focused, depending on the reason behind the person's behavior. That is, if a person seeks social support in order to receive encouragement and comfort, that person is using emotional coping. *Avoidance coping and life satisfaction*: Lazarus and Folkman (1984) and Carver (1997) asserted that the passive form of coping (avoidance coping) is less healthy, compared to the other coping styles. In the agreement, Dwyer and Cummings (2001) posited that avoidance coping has many negative consequences such as decreased self-confidence, increased stress, powerlessness, and lowered well-being. With regard to medical students, Park and Adler (2003) found that their psychological and physical health decline after the first year of training as a result of using avoidance coping.

Conceptual Framework

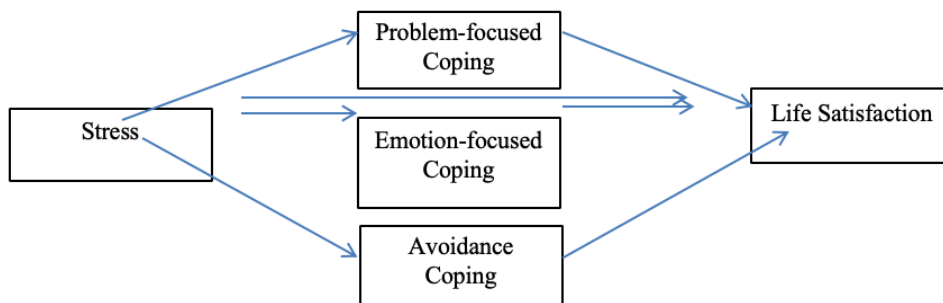


Figure (1) Path model of the Direct and indirect effect of Stress on the Life Satisfaction mediated by different coping styles.

Methodology

Participants

The samples consisted of 216 participants 45.8 % (N=99) were female and 54.2 % (N=117) were male. The year of study of the participants are from 1st year of 7th year (Final part II), with the mean of M=3.75 (SD=1.53) from the Institutes of Medicine I and II from Yangon, Myanmar. The participants' average age is 21 years old.

Instrumentation

Perceived Stress Scale (PSS-10) self-assessment developed by Cohen, Kamarck, and Mermelstein (1983) is employed to measure the stress level of the medical student respondents. The PSS was found to have strong internal consistency.

Cohen, Kamarck, & Mermelstein (1983) reported Cronbach's α between .84-.86 for PSS. Test-retest reliability for the PSS was .85.

Coping Inventory for Stressful Situations (CISS) developed by Endler and Parker (1990) has 48-item designed to measure three coping styles (i.e., problem-focused coping, emotion-focused coping, and avoidance coping). Each factor consists of 16 items and is deemed to measure the distinct aspect of each of the three coping styles. Each of the 48 items of the CISS is to be scored on a 5-point Likert scale. Internal consistency scores (Cronbach's alphas) were good, ranging from .75 to .88.

Satisfaction With Life Scale (SWLS) is developed by Diener, Emmons, Larsen, and Griffin (1985). Each item statement is to be scored using a 7-point Likert scale ranging from 1=*Strongly disagree* to 7=*Strongly agree*, with high scores reflecting more satisfaction with life.

The SWLS is regarded as one of the most widely used measures designed to assess a respondent's level of life satisfaction. The SWLS contains five items designed to assess the cognitive-judgmental aspect of life. The scale has reported internal consistency coefficient (Cronbach's alpha) of .87 and a test-retest reliability correlation of .82 for a two-month period (Fischer & Corcoran, 2007).

Data collection

The researcher personally requested permission from the department heads of the two targeted medical institutes, University of Medicine 1 and 2 – to collect data for this study. Upon obtaining permission from the heads of the two medical universities, the researcher proceeded to conduct the study in the classrooms. 250 questionnaires were distributed to the medical students and participants were obtained through convenience sampling where each potential respondent are asked for his or her verbal informed consent after reading the cover letter.

After collection of all the completed questionnaires, the researcher inspected the questionnaires to check for possible errors of omission and commission. Only 216 questionnaires are valid and subjected to statistical analysis.

Result

Reliability Test

Reliability analysis conducted for the PSS-10, CISS (problem- focused coping, emotional -focused coping, and avoidance- focused coping) and SWLS. The purpose of the reliability analysis was to maximize the internal consistency of these five measures by identifying those items that are internally consistent (i.e., reliable), and to discard those items that are not.

The criteria to retain the items from the scales is that if the Cronbach's alphas is sufficient which is above .60. If the Cronbach's alphas is below .60 the (I-T) correlation will be examined. The computed Cronbach's alpha coefficients for all five

scales were adequate and ranged from .66 to .86.

Path Analysis

In order to test the hypothesized direct and indirect effect represented by the path model depicted in Figure 1, path analysis via regression analysis was conducted. The analysis involved: (1) the dependent variable of life satisfaction on the predictor variables of perceived stress, problem-focused coping, emotional-focused coping and avoidance-focused coping; and (2) the mediator variables problem-focused coping, emotional-focused coping and avoidance-focused coping on the predictor variable of perceived stress. The question of whether to use direct effect as a gatekeeper to test mediation is still a common view among statisticians (Shrout & Bolger, 2002).

Baron & Kenny (1986) method suggests that certain criteria must be met in order effect to mediate in the absence of the mediator (M) the independent variable (X) the dependent variable. Therefore we can come to the conclusion that even if the total effect is not significant the relationship between stress and satisfaction with life is mediated by three coping styles (problem-focused coping, emotional focused coping and avoidance focused coping).

Table 1: Multiples Regression Analysis of the dependent variable life satisfaction on the predictor variables of perceived stress, problem-focused coping, emotional-focused coping and avoidance-focused coping

Predicted variable β	B	SE
Stress -.03	-.03	.06
Problem focused coping .35*	.42	.78
Emotional focused coping -.13	-.13	.06
Avoidance focused coping .12	.13	.07

* $p < 0.01$

The result of the multiple regression table show that problem-focused coping is the significant predictor of life satisfaction ($\beta=.35$, $p<0.01$). Problem-focused coping explains 18% ($R^2 = .15$, $p < 0.01$) of variance in life satisfaction which is highly significant at $F(4,211)=11.570$, $p < 0.01$. The result of the multiple regression table show that Emotional focused coping is the significant predictor of life satisfaction ($\beta=-.13$ $p<0.05$).

Avoidance focused coping is not a significant predictor of life satisfaction. Stress is not a significant predictor of life satisfaction and (See Table 8). It shows the correlation between stress and life satisfaction is -.096.

The result of the multiple regression of the effect of stress on emotion-focused coping show that stress is the significant predictor of emotional focused coping ($\beta = .37$, $p < 0.01$). Stress explains 13.6% ($R^2 = .136$, $p < 0.01$) of variance in emotional focused coping which is highly significant at $F(1, 214) = 33.784$, $p < 0.01$. Stress is not the significant predictor for problem-focused coping and avoidance focused coping. The correlation is -.059 and .025 respectively.

Discussion and Suggestions

The result shows the perceived stress doesn't predict the life satisfaction of Myanmar Medical students. The result shows that perceived stress doesn't decrease the level of life satisfaction significantly. This finding is contrary to those obtained from past studies conducted among Chinese medical students which demonstrate that perceived stress has a significant relationship the well being (Shi et al., 2015). Another study also found that the stress has negatively related to the satisfaction with life in Turkish medical students (Kaya, Tansey, Melekoglu, & Cakiroglu, 2015).

In order to understand better the result of the present findings which is different from the previous studies which discussed above, the researcher also has examined the following aspects. First, checked the items of the scales in detail such as the meaning of the items which holds the high reliability and it doesn't show any confusion. In most research, the socially desirable answer has affected factor, however, in this study that is not a relevant fact (Johnson & Van De Vijvar, 2002).

According to this study, some factors have been discussed which would affect the result. The sampling has some bias such as the choosing the students, meaning that the questionnaires are not equally distributed among the students of first year to final year. Among 216 respondents, 133 respondents are from Final Part II which is more than 50% of the total sample size. According to the medical students and the professors, during the academic years, there are certain years in which most of the students agree. For instance, in the first year, there are many activities for the fresher and the course doesn't have much different from which they have learnt for the matriculation exam.

One of the coping mechanisms for stress in Myanmar people is going to the temple and making merits which significantly relieve the stress and tension. Moreover, the medical training in Myanmar is considered as separate life which means that medical students only consider learning in university as stressful within the academic context but this doesn't affect their life in general. And it is probably because they consider their life as different from the academic duties they do. In addition, physicians and medical students are highly respected and looked up in the

society. Knowing that they would be future medical doctors, it could be possible that though the academic life is challenging and stressful, the students are satisfied with their life.

The result showed that the effect of the problem-focused coping on the life satisfaction is significant in the current study. The result showed that problem-focused coping increase the life satisfaction of students which has similar findings with other studies (Carver, Scheier, & Weintraub, 1989). This finding is consistent with Lazarus and Folkman presented in the transactional model of stress and coping (Lazarus and Folkman (1984). Similar findings have found in the research conducted among nurses (Louk zadeh & Mazloom Bafrooi, 2013). However, in the current study, the result showed that the stress didn't predict problem-focused coping.

The result found that stress predicts the emotional focused coping styles of medical students. When the students have stress they don't use problem-focused coping instead they use emotional focused coping. This result is consistent with the other studies where stress is positivity related to the emotional-focused coping that is, the medical residents employed more emotion-focused coping when their stress level is high (Alosaimi, Almufleh, Kazim, & Aladwani, 2015). In the present research finding, most of the students don't use problem- focused coping during their stressful time. However, the emotional-focused coping doesn't predict the life satisfaction in the present study. The correlation between emotional focused coping and life satisfaction and avoidance focused coping and life satisfaction is negatively significant.

Limitations of the Study

Comparing with the whole population of the medical students (N= 216) respondents not represent the whole medical student population. There were 5 medical universities and a University of Defense Service Army, the sample size from the current study would represent the all the medical students across Myanmar. The questionnaires are self-administrating and there could be a bias that students would choose the socially acceptable choices. The time of the research might also affect the result of the level of stress. The psychosocial variables investigated in this study, although widely used in Western nations, are not well-researched within the Myanmar context. In particular, the psychometric properties (reliability, validity) of the scales employed to measure these constructs (e.g., Perceived Stress Scale) have not been tested within the Myanmar context. Thus, future research should be directed at testing the psychometric properties of these scales as they are applied to non-Western cultures to ensure their cross-cultural reliability and validity. In other words, there is a need for the validation of these scales within the Myanmar cultural context before their use can be justified and the obtained results interpreted with confidence. According to the information received from the professors and some students during the informal interview the medical curriculum of the first year and final part 1

students have less stress than other grades students in the medical university. This could affect the students' response to stress and satisfaction with life as the respondents are not equally chosen.

Recommendations and Avenues for Future Research

Based on the overall findings the present researcher offers the following recommendations. The administrators of the medical institutes should pay attention to the well being of the medical students and encourage to use the problem-focused coping when they encounter with academic or personal. Future research should consider using the translated version of the measurement (scales) in order to avoid any misunderstanding about the questionnaire. Though the questionnaires are written in simple language, for the students whose first language is not English might have some confusion when they have to answers sets of questionnaires. Furthermore, the sample should be conducted in the small group; a group of ten. So that the participants can clarify if there is any question when they are answering and the study can be administered closely. The current study used only Perceived stress scale PSS-10 and Satisfaction with Life Scale (SWLS). The scale of life satisfaction is regardless of wildly used in past studies, the items are not adequate enough. Future research may consider examining the level of stress with other stress scales and for the satisfaction with life, different aspect of wellbeing should be examined. Since the intensity of the course is different between the academic year it would be better if the study was conducted according to the academic year of the study such as so that it would provide better results depending on the academic grade. The result showed that stress leads to emotional focused coping among Myanmar medical students. The more stress the students experience; the possibility to employed emotional focused coping is increased. Therefore, the administrations should conduct seminars on awareness on healthy coping styles for the students.

Conclusion of the Study

The current research aimed to explore direct and indirect effect of stress on the life satisfaction of medical students from Myanmar mediated by the three coping styles. The result showed that the direct relationship between stress and life satisfaction is not significant in this study. However, the problem-focused coping styles has significantly influence on the life satisfaction of medical students in Myanmar. This study shows, the relationship between stress and the emotional-focused coping is found significant.

It can be concluded that the more the students use problem-focused coping their satisfaction life will be higher. At the same time, the study shows that the higher the stress level, use of emotional-focused coping mechanism is increased. As most of the studies from institutes of medicines are focusing on modern day diseases, public

health and other health related issues, the finding of this mental issue study would be useful for the further research to promote the importance of life of medical students.

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