The Relationship between Psychological Vulnerability and Mental Health among Thai Graduate Students

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Abstract

A graduate student is prone to high depression and anxiety due to the rapid change in terms of responsibility and new environments. In order to promote mental health prevention, there should be more studies that in-depth analyze the main role of predisposing variables in mental health struggles, one of which is psychological vulnerability. In this study, psychological vulnerability is defined as a thinking pattern that reflects distorted views and may result in negative coping behaviors. These psychological vulnerabilities are related to perfectionism, perception of social dependency, the need for approval, negative attributions, unhelpful reaction to stress, and criticism. This study explored the correlation between these specific psychological vulnerabilities and mental health, especially among Thai graduate students. Three hundred eighty-four actively enrolled Thai graduate students were recruited through online platforms and completed an online self-report survey consisting of the Psychological vulnerability scale (PVS), Thai mental health questionnaire (TMHQ), and demographic survey questions. Descriptive statistics, Bivariate Pearson's correlation, and Independent T-test were used to analyze the data, and it statistically revealed that psychological vulnerability and mental health problems are positively correlated, including the areas of depression, anxiety, somatization, social function, and psychotic. Results demonstrated that a specific cognitive pattern might trigger graduate students to become more at risk for clinical mental health symptoms. This study on correlation hopes to provide a practical observation for mental health workers to be more attentive in raising awareness among graduate students, especially to recognize psychological vulnerability, which can easily be self-observed.

Keywords: psychological vulnerability, graduate student, mental health, higher education

1. Introduction

Examining Psychological Vulnerability as a factor predisposing psychopathology can be helpful to understanding the development of mental disorders. The term *'vulnerability'* is not a new concept in psychology. Primitively, the Vulnerability-Stress Model is the first step to understanding psychological vulnerability. The Vulnerability Stress Model proposes that vulnerability is a predisposing factor for developing a mental disorder (Ingram & Luxton, 2005). The theory suggests that all people have predisposing factors at a different level, and once combined with a situational stressor, individuals can develop a mental disorder. In other words, the more vulnerable a person is, the less stress is required for the occurrence of mental disorders. Psychological vulnerability is one of the predisposing factors in which occurring alone, without the right stressors, cannot cause mental health symptoms. (Ingram and Luxton, 2005). Therefore, this study aims to explore the relationship between psychological vulnerability and mental health problems to understand the aspects of psychological vulnerability and its characteristics that may contribute to mental disorders.

Psychological vulnerability can represent various factors reflecting psychological aspects; however, there has not been a particular definition that precisely defines psychological vulnerability. A suggestion by Ingram stated that researchers might define vulnerability by acquiring a conceptual understanding of this entity by examining its core features collaborating with the existing research. (Ingram, 2003). In this study, Psychological Vulnerability is defined as a set of cognitions that enhance harmful reactions to stress, according to Sinclair and Wallston, the developer of the psychological vulnerability scale. This definition is congruent with a clearer definition from another research, which defined psychological vulnerability as a pattern of cognitive beliefs reflecting a dependence on achievement or external sources of affirmation for one's sense of self-worth" (Sinclair and Wallston, 1999). In particular, psychological vulnerability is usually considered to be a "specific cognitive vulnerability" because its construct is conceptualized as cognitive vulnerability (Mathews and MacLeod, 2005). The significance is that cognitive vulnerability is described as a false belief, cognitive bias, or pattern of thought that predisposes an individual to psychological problems. Unlike in a healthy population, who may experience negative emotions during stressful events, people with cognitive vulnerability interpret a stressful situation through a distorted meaning system which later leads to more than just emotions, but a negative effect. This condition creates a negative cognitive structure, resulting in a more negative impact (Ingram, 2003). To examine the root of cognitive vulnerability, three supportive theories were found. First, the Cognitive Schema model suggests that the mental blueprint on depression develops during the starting of stressful childhood events. The second theory is the Hopelessness Model suggests that cognitive vulnerability is formed during the internalizing process. Third, research shows that other possible explanations of cognitive vulnerability's origin are related to interpersonal relationships within the family during the developmental period (Ingram, 2003).

The significant relationship between psychological vulnerability and various mental health problems is a common finding. Satici stated the psychological vulnerability is a risk in developing psychopathology (Satici, 2016). Furthermore, psychological vulnerability is linked to a mental breakdown. Ingram further explained that even a little stress could activate clinical symptoms when the vulnerability is at the highest level (Ingram, 2010). Psychological vulnerability is even considered a natural consequence of being human (Satici, 2013). However, Satici (2014) also defined Psychological vulnerability as a factor reflecting the individual's low capacity to deal with a system of maintaining emotional strength, in case of adverse events and pessimistic attitude, due to the lack of social support.

To investigate psychological vulnerability among graduate students, researchers must first raise a great concern for the mental health awareness of graduate students. According to Evans' study (2018), graduate students reported significant mental health problems than the general population. Low self-rated emotional health has become increasingly common among graduate students, and the vulnerability factors that were found among this group of students are also identified as an associate with self-harm behavior. Yusufov et al. (2019) found that graduate students, especially in the clinically oriented program, face substantial stress from taking responsibility for patients while lacking experience. Moreover, graduate students obtain stress from other sources such as an increased workload, intensification, a rapid change in lifestyle, financial cost to consistently manage stress from an expectation to meet the standard in coursework and time-management (Levecque, 2015).

The relationship between psychological vulnerabilities and mental health problems should be thoroughly explored among Thai graduate students to identify risk factors specifically related to graduate students' challenges in maintaining good mental health. Kiamasri (2014) indicates that psychological vulnerability and mental health among graduate students are related because a set of cognitive patterns can determine the problem coping style of an individual. The psychological vulnerability may also predict mental health problems of students who are under stressful events. The study found that students with low psychological vulnerability also showed signs of logical thoughts, suitable communication, responsible behavior, independent personality, and constant mood. Lastly, a recent study found that students who acknowledge their psychological problems tend to seek more help (Garcia-Williams, 2014). Hence, mental health awareness is a necessary tool among graduate students to preserve good performance while coping with stress in the most beneficial way.

As this study was designed to help understand psychological vulnerabilities, researchers aimed to investigate the relationship between psychological vulnerability and mental health problems among Thai graduate students. Given the evidence from previous literature, it was hypothesized that psychological vulnerability and mental health problems are significantly correlated.

2. Research Methodology

Participants

Three hundred and eighty-four graduate students currently enrolled in a Graduate Program in Thai universities gave consent and completed the online questionnaire through Google Form without missing data. Students were 18 years and older and must have the ability to read and understand the Thai language. Participants were able to stop completing the survey without having to inform in advance, while those who did not agree to consent or were not graduate students were automatically excluded.

Measures

The Psychological Vulnerability Scale (PVS)

The PVS is a self-report, 6-items scale with an uncomplicated instruction containing six screening questions. Researchers translated it into Thai using the back-translation protocol, the Index of Item Objective Congruence (IOC) procedure and tested for its psychometric properties before being used in this study. The Internal consistency was acceptable. ($\alpha = .67$) and the instrument was proved to be both reliable and valid. The higher PVS score indicates the higher psychological vulnerability of the individual.

Thai Mental Health Questionnaire: TMHQ

The TMHQ is a practical instrument for screening mental health symptoms in the Thai general population. TMHQ was proved to have construct validity using the factor analysis method, and the reliability test was conducted using Cronbach's alpha coefficients with the result of .89 (Phatharayutwat, 2002) The TMHQ is a self-administer, ordinal rating scale containing 70 questions. The sample question states, "In this past month, do you experience any of these symptoms?". The scoring system includes 0 = Not at all, 1 = A little, 2 = Somewhat, 3 = usually, and 4= frequently. The Sum of scores reflects the five domains of mental health: somatization, anxiety, depression, psychotic, and social function. (Phatharayutwat et al., 1999)

The Demographic Survey

This survey is to obtain the personal information of participants. It includes questions about age, year of study, study area, type and location of the university, marital status, and gender.

Designs and Procedure

This study is an online cross-sectional study, and the methods used in this study were conducted in orderly. This is part of completed research which obtained approval from the Institutional Review Board (IRB) at the faculty of Medicine at Siriraj Hospital, Mahidol University. (COA no. Si 179/2020) This study received electronic permission to translate and study the psychometric properties of the Psychological Vulnerability Scale (PVS) from the creator of the scale. This permission allows researchers to translate the original psychological vulnerability scale into Thai

and use it as a questionnaire. The permission to use the Thai Mental Health Questionnaire (TMHQ) was granted, and it allows researchers to use and interpret the results of the questionnaire for each individual if they request the interpretation for their mental health scores. Participants accessed the Google form survey via an online link provided on the advertising posts. They were required to complete the survey consisting of four sections: information sheet and informed consent, demographic questions, Psychological Vulnerability Scale, and Thai Mental Health Questionnaire. This study used SPSS version 28 to analyze the data. Descriptive statistics, Pearson's Correlations, and Independent T-test were used to analyze the data.

3. Results

Table 1 shows the demographic characteristics of the sample group. The respondents were primarily female students (73.3%). The data showed that students enrolled in various fields of study, but mainly in Social sciences (24.5%), Health science and welfare (21.9%), and Business and Law (15.1%) consecutively. Most participants in this study were at least in their second year of graduate school (71.1%), with the age range aligned between 21-61 years (M= 27.54, SD = 4.79), and were single (93.5%). The majority of students studied in Public universities (88%) located in Bangkok and metropolitan areas (95.3%).

Table 1

The demograpgic data of sample group (N=384)		**N**	**%**
Fields of study	1.Education	19	4.9
	2.Arts and humanities	56	14.6
	3.Social sciences	94	24.5
	4.Business and law	58	15.1
	5.Natural sciences	38	9.9
	6.Information Technologies	14	3.6
	7.Engineering & Architecture	21	5.5
	8.Health science and welfare	84	21.9

Years of study	1	131	34.1
	2	142	37.0
	3	61	15.9
	4	28	7.3
	5+	22	5.7
Location of university	Bangkok and metropolitan areas	366	95.3
	Provinces	18	4.7
Types of university	Public University	338	88.0
	Autonomous University	5	1.3
	Rajabhat University	4	1.0
	Private University	37	9.6
Age	21-30	320	83.3
(*M*= 27.54, *SD* = 4.79)	31-40	54	14.1
	41-50	7	1.8
	>55	3	0.8
Gender	Male	97	25.3
	Female	272	70.8
	Not specified	15	3.9
Legal marital status	Single	359	93.5
	Married	23	6.0
	Divorce	2	.5

Table 2 Descriptive characteristics of the scores of psychological vulnerability scale (PVS) in Thai (N=384)

M	SD	Min	Max	Variance	Skewness	Kurtosis
18.328	4.4436	7	30	19.746	-.280	-.141

Table 2 showed the mean score of the PVS to be 18.3 (*SD* = 4.4), suggesting a moderate psychological vulnerability. In addition, female students reported slightly higher PVS mean scores than male students (*M* =18.4, *SD* = 4.3 vs. *M*= 17.9, *SD* = 4.6), but students who chose not to identify gender reported the highest PVS mean scores (*M* = 20.0, *SD* = 5.5), however, there were no significant differences between gender. About 24.7 percentage of students scored a full score of 5 (describes me very well) for PVS item number five regarding the need of approval from others, resulting in the highest mean score compared to other PVS items in this study. (*M* = 3.55, *SD* = 1.21)

Our results showed that gender, age, marital status, location, and university types did not significantly affect the scores of PVS. However, Business administration and Law students seemed to report the lowest PVS score compared to other fields of study. At the same time, students in the fourth year of graduate studies reported the highest PVS score compared to other years of study.

Table 3 Number of students who reported clinical problems in each domain on the TMHQ scale (N=384)

TMHQ Scale	T-score ≥65		T-score <65	
	N	%	N	%
Somatization	147	38.28	237	61.72
Depression	123	32.03	261	67.96
Anxiety	138	35.94	246	64.06
Psychotic	8	2.30	376	97.92
Social Function	6	1.56	378	98.44

Note. Each student may have more than one symptom.

Table 3 displayed the number of students who reported having a T-score above 65 for each domain of the scale, indicating the 'problematic' level of mental health symptoms. This finding showed the discrimination between healthy students and the students with mental health problems that needed to be addressed. Additionally, thirty-eight percent of graduate students reported having concerns and complaints about physical dysfunction, and almost thirty-six percent of participants showed signs of general indication for anxiety disorders; moreover, each student might have presented more than one symptom in this table. Thirty-two percent of students reported symptoms of depression, and 14.8% (n = 18) of students who reported depressive symptoms scored above the cut-off point for items concerning suicidal ideation. On the contrary, participants with a T-score lower than 65 represented the normal range in mental health symptoms among the Thai general population. In this study, most respondents reported having a normal range T-score in the Thai mental health questionnaire.

Data analysis was conducted to examine the correlation using Bivariate Pearson's coefficient correlation between Thai-PVS and the TMHQ. The results were as the followings:

Table 4 The correlation between psychological vulnerability and mental health

Scale	*M* (*M*/Item)	TMHQ				
		Somatization	**Depression**	**Anxiety**	**Psychotic**	**Social Function**
PVS	18.328 (3.05)	.471**	.537**	.481**	.349**	.444**

Notes. PVS = Psychological Vulnerability Scale (Thai translation), TMHQ = Thai Mental Health Questionnaire
** $p < .01$, one-tailed

Table 4 showed a positive and moderate significant correlation between PVS scores and depression ($r = .537$, $p < 0.1$). The correlation between PVS score and other TMHQ domains ranged from r = .48 (anxiety), r = .47 (somatization), r = .444 (social function), and r = .349 (psychotic), considered to be a significant, positive, and weak to moderate relationship. Additionally, Independent sample t-test result revealed that the mean score of PVS on the group of students who reported having problematic depressive symptoms (M = 21.138, SD = 3.746) was significantly worse than students who scored below the T-score for depression (M = 17.004, SD = 4.124). ($t(382) = 9.434$, $p < .01$)

4. Discussion and Conclusion

Discussion

The PVS mean score found in this study was considered similar to previous research on psychological vulnerability among higher education populations, indicating a moderate level of psychological vulnerability (Nogueira et al.2017; Satici & Kayis, 2013; Satici, 2016; Uysal, 2015; Çutuk, 2019). However, the Thai university population's established norm in distinguishing different score levels has not been studied. This study was the first to examine the PVS scores among Thai graduate students. Also, more than thirty percentages of graduate students reported having clinical symptoms in somatization, anxiety, and depression and should be seeking professional help.

The significant positive relationship between psychological vulnerability and mental health could result from unsuccessful coping strategies because individuals who fail to manage these vulnerabilities, such as perfectionism, self-criticism, and the need for approval, tend to report more mental health problems (Huta, 2010). Psychological vulnerability generally leads to self-blame, anxiety, and negative emotions, which are unhealthy coping strategies (McWilliams et al., 2003). These aspects of vulnerabilities can be measured in the questionnaire. Psychological vulnerability was also negatively correlated to a social function, an ability to handle social interactions effectively. Psychologically vulnerable people withdraw more quickly when faced with challenging situations. Moreover, psychologically vulnerable individuals tend to require approval from others to increase their sense of self-worth. If they do not reach their goals, they are likely to become frustrated (Uysal, 2015). This result supported our finding that graduate students scored highest on PVS item number 5 regarding the need of approval. Therefore, It is important to identify vulnerabilities to help individuals develop techniques to overcome these false perceptions that have been causing disturbances in their daily lives. Psychological problems are believed to persist as long as the error cognitive patterns are present and improved when they are altered. As the study stated that temporary relief is produced by changes in proximal cognitive components of the problems, but durable improvement requires changes in the underlying psychological vulnerability factors (Riskind & Alloy, 2006).

Future researches may consider focusing on the practice of effective coping skills, which, most of the time, help improve mental and emotional well-being. It is also essential to discover the relationship between psychological vulnerability and coping strategies in Thai university students. Furthermore, Stress reduction intervention is important because of the rising prevalence and severe consequences of stress among graduate students. Although all individuals may carry vulnerabilities to mental disorders, the most important observation of the point where a mental disorder is developed is the interaction between predisposing factors and stressors. For suggestions, a meta-analysis on cognitive behavioral therapy as an intervention for college students with stress stated that cognitive-behavioral therapy greatly impacted perceived stress, in other words, the cognitive pattern of the individuals. This finding can help students deal with their psychological vulnerabilities (Yusufov, 2019).

Limitation

Participants in this study were supposed to represent Thai graduate students from all over Thailand; however**,** data showed that most participants were disproportionately selected in Bangkok and metropolitan areas. The type of university is mainly public university, although types of the university did not significantly affect the scores of PVS. Also, the distinguishment between types of graduate students could be better identified because the result could differ among different groups. Lastly, this is also an online self-report survey, so it could contain biases.

Conclusion

This study highlights the importance of mental health awareness among Thai graduate students by exploring graduate students' current mental health status in the academic year of 2020-2021. As well as the relationship between psychological vulnerability and mental health warned mental health workers to pay attention to cognition patterns in students. As previous studies confirmed psychological vulnerability to be a predictor of subjective well-being, our findings dig deeper into representing the idea of the specific cognitive vulnerabilities, which are related to perfectionism, perception of social dependency, the need for approval, negative attributions, unhelpful reaction to stress, and criticism, which play the significant role in contributing to mental health problems among graduate students, especially in depression. Moreover, these vulnerabilities can be self-observable through a screening questionnaire, and this may help individuals be aware of their mental health status and look for the appropriate resources. Lastly, this study may help those interested in mental health awareness identify specific mental health needs and cultivate a healthy self-perception of vulnerability, especially in university settings.

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