ORIGINAL ARTICLE

Mental Health Screening and Its Correlation to Academic Self-efficacy Among Public Health Students

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ABSTRACT

Introduction: An increasing percentage of students sought counselling for psychological issues. This study aimed to determine the prevalence of students based on the type of mental health in terms of the mental health continuum and whether it affects academic self-efficacy. **Materials and methods:** This was an analytic study with a cross-sectional approach. The study was conducted in Jember University, East Jawa during May-June 2022. The population was public health students. The sample was 115 of 806 students, by voluntary response sampling. Instruments were using the MHC-SF, while psychopathological indicators were measured by HSCL-25, and academic self-efficacy using GSE. Multivariate data was analyzed with an ordinal regression test. **Results:** A total of 115 public health students aged 18-23 years answered the survey. Most of the respondents have high academic self-efficacy (72.8%) and most of them have depression (87.8%). A significant correlation between students' anxiety and depression levels in different mentally healthy statuses (p-value: <0.000; r: -0.488). The negative correlation between the mentally healthy and the psychopathological means higher scores of mentally healthy reflect lower scores of anxiety and depression levels. Analysis using ordinal regression showed that the mentally healthy significantly affects academic self-efficacy (p-value: 0.000; OR: 16.4) means there is a tendency of 16 times to obtain high academic self-efficacy on students with better mental health, however psychopathological did not significantly affect academic self-efficacy. **Conclusion:** We need to develop preventive intervention programs so that students achieve more optimal psychosocial functioning that affects academic self-efficacy.
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Keywords: Academic self-efficacy, Mental health, Public health student, Two continuum model, Psychological issue, Health screening

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INTRODUCTION

Students are more likely than the overall population to experience mental health issues (1). Mental health-related problems among college students need more attention because students are a population group that is prone to experience psychological problems (2). Previous studies stated that student mental health issues have emerged as a significant concern in several countries (1,3). The majority seek help for depression or anxiety (4). The increasing demand for counseling services among university and college students highlights the significance of mental health, as seen by the rising number of students seeking help for psychological issues such as learning impairments, self-harm, and eating disorders (1). Young adults will experience the effects of mental health problems directly when entering college. Unfortunately, most people become aware of a mental health condition and experience their first symptoms by the time they are 24 years old. This means that while at university is great potential for many which can trigger the onset of mental illness (4). Students were at normal levels for anxiety and depression by the time they entered orientation. But only six months later, depression levels will increase during the first college term, and fail to return to their original levels at the end of the first year, or even at the end of school (5).

The Covid-19 pandemic has drastically changed various aspects of life, including the learning experience, which can multiply the different psychological problems that have been previously owned. During the Covid-19 pandemic, a survey conducted by the Association of Indonesian Mental Health Specialists identified an increase in psychological problems from 70.7% in 2020 to 82.5% in 2022. Two psychological disorders are the most common, anxiety and depression. Cases increased and the most during the pandemic were anxiety (from 68.9% 2020 to 75.8% 2022) and depression (from 69.3% 2020 to 84.1% 2022) (6,7).

Psychological well-being encompasses cognitive, emotional, and behavioral aspects of mental health.

This is the determinant of human cognition, emotions, and actions. Furthermore, mental health can exert an influence on daily functioning, interpersonal connections, and physical well-being (8). The causes of mental diseases in students include the impact of social media, a loss of sleep caused by electronic gadgets, financial concerns, and inadequate public services. One of the solutions that can be given is the existence of a counseling service unit so that students can submit their psychological problems that may affect their academic performance. Campuses have a huge impact on student life. The opportunity to support the mental health of their students is an excellent position and can be said to be part of the responsibility of the university. This is a moral obligation. Students who know how to take care of themselves will be able to follow a better college process so that they can bring the results of their education to the community. Finally, they can graduate and become champions for their happiness (9).

In assessing mental health, the focus is usually on psychological dysfunction (e.g. depression, anxiety, stress) referring to the concept of mental health as the absence of psychopathological symptoms (Mitchell, 2016). That is, individuals who are classified as mentally healthy are individuals who do not have psychopathological symptoms. On the other hand, individuals with many psychopathological symptoms are classified as mentally ill (10). According to this viewpoint, mental health and mental illness are on the same spectrum. According to Jahoda, the lack of psychopathological symptoms alone is insufficient to meet the mental health standards (11). The WHO definition of mental health is a state of emotional, psychological, and social well-being that is perceived by the individual (12).

The mental health model that integrates the two approaches is called the Two Continuous Model of Mental Health and Illness (10). This model argues that mental health has two different dimensions, namely the mental health continuum and the mental illness continuum. Each dimension is in the low to high range. This dual-factor mental health model was first proposed by Green-spoon and Sasklofske (2001) in a sample of elementary school students (13). Furthermore, this model of mental health research was mostly carried out on samples of adolescents or high school students, and samples of students (14–16).

This two continua model argues that the absence of indicators of mental illness does not necessarily mean that the individual is mentally healthy, nor does the presence of indicators of mental illness mean that the individual does not have a high level of mental health (17). So, both indicators of mental health and mental illness are needed in identifying the mental health status of individuals. Research with a comprehensive approach using two continuum of mental illness and mental health seems to be relatively rare (17).

People who graduate from public health programs should be able to concentrate on illness prevention, which includes health screening, especially mental health screening. Routine health screening can improve disease prevention and reduce disease severity. Surveillance of the well-being of public health students can aid in the early detection of issues and enable the implementation of treatments to address these issues. Unacknowledged and untreated mental health issues might potentially result in students abandoning their academic pursuits or engaging in perilous and hazardous activities. Studies have demonstrated that the lifestyle choices of healthcare worker can impact their attitudes towards patients and their approaches to health teaching (18). So that they promote health and make it possible for them to appear as reliable sources of health information. In addition, the faculty of public health at the University of Jember has never conducted mental health screening on students.

So based on the description above, the research problems of this study were: (1) How are the prevalence of student mental health in terms of indicators of mental health (flourishing, moderately mentally healthy, and languishing) and indicators of psychological distress (anxiety and depression)?; (2) Is there a correlation between students' anxiety and depression levels in different mental health groups (flourishing, moderately mentally healthy, and languishing)?; (3) does mental health status affects the academic self-efficacy?

MATERIALS AND METHODS

Study Design

The cross-sectional research design was used to assess mental health status based on the two continua models: mental illness and mentally healthy; and the effect of mental health status on academic self-efficacy among a convenience sample of university students in East Java, Indonesia.

Setting and Participants

The study was conducted at the University of Jember, East Java, Indonesia during May-June 2022. The population in this study was 806 public health students. The sample was 115 of 806 students, by voluntary response sampling. A convenience sample of university students was recruited through an online information weblink distributed over the social network platform WhatsApp®. The questionnaire in Bahasa Indonesia Google Forms format was initially posted on several WhatsApp® chat groups of students in two study programs: Nutrition and Public Health. When the students clicked at the link, they were directed to the online Google Form. Each completed questionnaire is saved to the researcher's Google Drive. All the completed forms were available to see on the drive, which was password-protected and could be retrieved whenever needed for assessment. Participants were

free to answer the questions at their own time, giving them privacy or a choice of location. Using a α of 5%, we estimated that 115 would be the minimum viable sample size for sufficiently powered analysis.

Tools and Techniques

Using Bahasa Indonesia, the data were collected using a self-administered questionnaire. The questionnaire asked structured, closed-ended questions. The questionnaire had no open-ended or ongoing questions, making it simple and quick to complete; based on a pilot test activity, the investigator predicted that each participant would spend 7 to 10 minutes to complete their form. The questionnaire was separated into four domains: characteristics, mentally healthy status, psychopathological status, and academic self-efficacy.

Mental health continuum indicators were measured by the Mental Health Continuum Short Form (MHC-SF) developed by Yang et al (19), while psychopathological indicators were measured by the Hopkins Symptom Checklist (HSCL-25) (20), and academic self-efficacy measured by the General Self-Efficacy Scale (GSE) which is tailored to the academic setting (21). MHC-SF is a self-report instrument containing 25 statements, consisting of statements measuring emotional well-being, statements measuring psychological well-being, and statements about social welfare. HSCL-25 is a self-report instrument that measures the symptoms of distress felt in the past week. This instrument was developed by Derogatis (20), consisting of ten statements measuring anxiety, 13 statements measuring depression and two statements measuring somatization symptoms. This scale has been widely used in student samples and shows good internal consistency for depression and anxiety scales (22).

Ethical Consideration

The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the University of Jember's Faculty of Dentistry's Ethics Commission (certificate number: 1535/UN25.8/KEPK/DL/2022, date of approval May 10th, 2022).

Statistical Analysis

The data were analyzed using the SPSS software application. Descriptive statistics were used to summarize participants' characteristics, mentally healthy status, and psychopathological status. Correlation analysis between psychopathological levels in different mentally healthy statuses (flourishing, moderately mentally healthy, and languishing) was analyzed by the Spearman test. The effect of mental health status on academic self-efficacy was analyzed using ordinal regression logistic test using SPSS and the results were presented in table and narrative.

RESULTS

A total of 115 full-time students in the faculty of public health aged 18-23 years old answered the survey. Most of the respondents were female (Table I). Most of the respondents have high academic self-efficacy (72.8%), are moderately mentally healthy (64%), and most of them have depression (87.8%) (Table II). Figure 1 shows more detail, either people with moderate or flourishing (mentally healthy conditions), most of them are detected with depression.

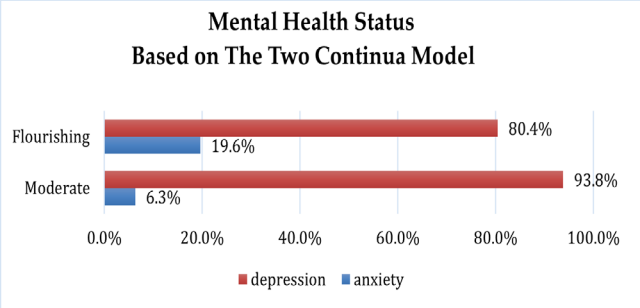

Figure 1: Mental health status based on The Two Continua Model: mental illness and mentally healthy

Table I: Demographic and characteristics of Respondents (n=115).

Demographic	n	%
Sex		
Male	11	9.6
Female	104	90.4
Age group		
18-20	76	66
21-23	39	34
Semester		
2nd	37	32.2
4th	40	34.8
6th	29	25.2
8th	9	7.8

Table II: Prevalence of Mentally Healthy, Psychopathological, and Academic Self-efficacy (n=115).

Indicator of variables		n	%
Academic Self-efficacy	Moderate	29	25.5
	High	86	72.8
Mentally Healthy	Moderate	64	55.7
	Flourishing	51	44.3
Psychopathological	Anxiety	14	12.2
	Depression	101	87.8
Total		115	100

Mental health status based on The Two Continua Model: mental illness and mentally healthy

Correlation analysis revealed a significant correlation between students' anxiety and depression levels in different mentally healthy statuses (flourishing, moderately mentally healthy, and languishing) measured by the MHC-SF and HSCL (p-value: <0.000; correlation coefficient: -0.488) (Table III). The negative correlation between the mentally healthy (flourishing

and moderate) and the psychopathological (anxiety and depression) means that higher scores of mentally healthy reflect lower scores of anxiety and depression levels.

Table III: Correlation between students' anxiety and depression levels in different mental health groups (flourishing, moderately mentally healthy, and languishing) (n=115)

Indicator of variables	Psychopathological		p value	Correlation Coefficient
	Anxiety n (%)	Depression n (%)		
Mentally Healthy				
Moderate	4 (6.2%)	60 (93,8 %)		
Flourishing	10 (19.6%)	41 (80.4%)	<0.000	-0.488

*Significant at 5% level of significance (P<.05)

The Effect of Mental Health Status on the Academic Self-efficacy

Ordinal regression analysis showed that the mentally healthy condition significantly affects academic self-efficacy (p-value: <0.000; odd ratio: 16.4) (Table IV). It explained that there is a tendency of 16 times to obtain high academic self-efficacy on students with better mental health. However, psychopathological did not significantly affect academic self-efficacy.

Table IV: The Affect of Mental Health Status on Academic Self-efficacy (n=115).

Indicator of variables	Academic Self-Efficacy		p-value	OR	95% CI
	Moderate n (%)	High n (%)			
Mentally healthy					
Moderate	27 (42%)	37 (58%)	<0.000	16.4	1.296 – 4.304
Flourishing	2 (4%)	49 (96%)			
Psycho-pathological					
Anxiety	1 (7%)	13 (93%)	0.347		-3.287 – 1.154
Depression	28 (28%)	73 (72%)			

*Significant at 5% level of significance (P<.05)

DISCUSSION

People with mentally healthy conditions (moderate and flourishing), most of them are detected with depression. It means even though most of the students experienced moderate and flourishing as their mental health condition, they also experienced depression as their psychopathological condition. Previous research observed that most students' levels of psychological distress at college increased during the first year before leveling off in subsequent years (23,24). Some students, however, showed signs of extreme, ongoing anguish that did not abate with time. Their health may be affected, for better or worse, throughout this period (25). When looking at the overall health of young adults, especially those between the ages of 15 and 24, neuropsychiatric diseases constitute the leading cause of burden (1). A previous study revealed that approximately 13% of the students surveyed identified themselves as experiencing feelings of loneliness, both socially and emotionally. Certain students may encounter difficulties when shifting from residing with their family and possessing an established social network to establishing themselves in unfamiliar environments, cultivating new acquaintances, and assimilating into unfamiliar social circles. Furthermore, the study revealed that more than 60% of the students self-identify as financially challenged (21). Another research stated university students face heightened susceptibility to mental health issues because of the academic demands, elevated parental expectations, foreign educational settings, and necessary adjustments to their lifestyle (26).

Our study stated that there is a negative correlation between the mentally healthy (flourishing and moderately mentally healthy) and the psychopathological (anxiety and depression). It means that higher scores of mentally healthy reflect lower scores of anxiety and depression levels. Similarly, a previous study that stated higher scores of psychological well-being reflect lower scores of anxiety and depression levels (3). Screening for low levels of life satisfaction which is part of psychological well-being can serve as a valuable indicator for identifying students who may require support. Furthermore, by monitoring psychological well-being indicators in conjunction with measures of distress, we can obtain valuable and complementary evidence regarding the efficacy of universal prevention programs aimed at college students.

Ordinal regression showed that psychopathological did not significantly affect academic self-efficacy. However the mentally healthy significantly affects academic self-efficacy, there is a tendency of 16 times to obtain high academic self-efficacy on students with better mental health, which is in line with the previous study that found that students who experienced severe mental distress were four times more likely to have low academic self-efficacy and twice as likely to report delayed academic progress compared to students who reported little or moderate symptoms of mental distress (21). Another research stated that student challenges in college lead to food insecurity. According to Maslow's hierarchy of requirements, a conceptual framework consisting of five levels of human wants, insufficient food intake hampers the body's ability to operate at its best. Food insecurity can have detrimental effects on the physical and emotional well-being of undergraduate students, as well as their academic performance. Student who have restricted access to healthy meals experience difficulties concentrating on their studies, resulting in subpar academic achievement (27).

CONCLUSION

Most of the respondents have high academic self-efficacy (72.8%), are moderately mentally healthy (64%), and

have depression (87.8%). A significant correlation between students' anxiety and depression levels in different mentally healthy statuses (p-value: <0.000; r: -0.488). It means higher scores in mentally healthy reflect lower scores of anxiety and depression levels. Analysis using ordinal regression logistic test showed that the mentally healthy significantly affects academic self-efficacy (p-value: <0.000; OR: 16.4) means there is a tendency of 16 times to obtain high academic self-efficacy on students with better mental health, however psychopathological did not significantly affect academic self-efficacy. It could be a reference for developing preventive and promotive intervention programs so that students achieve more optimal psychosocial functioning. The recommendation for the next study is studying the academic self-efficacy to the risk of delayed student progress.

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