

Psychopathology Description in Medical Student Sixth Semester Regular Class Year of Education 2011/2012 Medical College University of Sumatera Utara

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Abstract

Psychopathology were often found in medical student but sometimes undetected. In teaching and learning process, there are factors that can influence the mental health of medical student for example physical health, academic pressure, financial issues, family issues and even exposure to patient's misery. The objective of the present study is to investigate the relationship between psychopathology and gender, economic status and students' academic performance. Participants were 70 medical student who study in medical college University of Sumatera Utara and randomly selected. Psychopathology was measured by using SCL 90. The association between psychopathology with gender, economic status and students' academic performance were assessed using Chi square test (significant value $p < 0.05$). Psychopathology were found in 60 percent of the participants and only students' academic performance were correlated significantly.

Keywords: medical student, psychopathology, SCL 90

1. Introduction

Medical students had experienced numerous stressors that can affect the well-being of students and various forms of psychopathology (psychological distress) are more frequently present among them than in other population (Tosevski, Milovancevic and Gajic, 2010; Salami, 2008; Nojomi and Gharayee, 2007; Khan, Mahmood, Badshah, Ali and Jamal, 2006). Reported levels of stress among medical students range anywhere from 25% to 75% (Nojomi and Gharayee, 2007). This stress during education can lead to mental distress and have a negative impact on professional life concerning patient care (Khan, Mahmood, Badshah, Ali and Jamal, 2006; Jadoon, Yaqoob, Raza, Shehzad and Choudhry, 2010). Studies suggested that medical students as a vulnerable group may have a high rates of mental health problems, especially anxiety and depression (Al-Qaisy, 2011; Salami, 2008; Tosevski, Milovancevic and Gajic, 2010; Dyrbye, Thomas and Shanafelt, 2006; Nojomi and Gharayee, 2007; Mouret, 2002; Rosenthal and Okie, 2005). A number of factors—including academic pressure, workload, financial issues, sleep deprivation, exposure to patients' suffering and death and student abuse—have been hypothesized can affect mental health in medical students (Dyrbye, Thomas and Shanafelt, 2006; Firth, 1986; Tosevski, Milovancevic and Gajic, 2010). In addition, Nojomi and Gharayee reports that gender can be a factor where they found higher prevalence of psychopathology for female than male students (Nojomi and Gharayee, 2007).

2. Subject and Methods

This study was approved by the Research Ethics Committee of Medical Faculty University of Sumatera Utara. Seventy medical students that went to medical college University of Sumatera Utara were recruited as participants. All participants were students in sixth semester regular class and willing to join the study. There were no exclusion criteria in this study. Written informed consent was obtained from all participants after giving a full explanation of the study protocol. We used the Symptom Check List 90 (SCL 90) to measure psychopathology. This study is a cross-sectional study and executed between 2 January until 28 February 2012.

2.1 Symptom Check List 90 (SCL 90)

The SCL-90 is a 90-item self-report questionnaire that has been applied as a descriptive measure of psychopathology (Holi, 2003; Nojomi and Gharayee, 2007). It designed to reflect the psychological symptoms pattern of community, medical and psychiatric respondents (Nojomi and Gharayee, 2007; Dyrbye, Thomas and Shanafelt, 2006). The SCL-90 is a simple questionnaire and was translated into bahasa Indonesia, which can be understood by every Indonesian, and its validity and reliability had been studied (Liau et al., 2007; Herianto, 1994). The instrument's global index of distress is the Global Severity Index (GSI), which is the mean value of all of the items. A score 61 and more indicates clinically relevant psychopathology (Herianto, 1994). Each item of the questionnaire is rated by the participants on a five-point scale of distress from 0 (none) to 4 (extreme). The SCL-90 consists of the following nine primary symptom dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism (Holi, 2003; Herianto, 1994).

2.2 Statistical Analysis

Univariate analysis was performed to describe each variable and was described by frequency table. Bivariate analysis was performed to analyze whether there are association between psychopathology with gender, economic status and students' academic performance. To assess the association we used Chi square test and statistical analysis was performed using SPSS software (version 14.0). A significant level was considered as 5%.

3. Result

Demographic characteristics of 70 participants are illustrated in Table 1.

Table 1. Demographic characteristics of 70 participants

Variable	n	%	
Gender	Male	25	35.7
	Female	45	64.3
Economic status	Satisfied	57	81.4
	Unsatisfied	13	18.6
Students' academic performance	Unsatisfied	15	21.4
	Satisfied	13	18.5
	Very satisfied	42	60.1
Residency	Stayed with parents	38	54.3
	Rent	29	41.4
	Private	3	4.3

Females were more among participants. Using the scoring method of the Symptom Check List 90 questionnaire, proportion of participants with psychopathology were 42 (60%). Twenty seven female participants had psychopathology compared to 15 male. With Chi square test we found that there are no association between psychopathology and gender ($p=1.000$). Based on economic status that were self-reported by the participants, we found 32 participants were satisfied with their economic status while studying in medical college versus 10 unsatisfied participants scored 61 and more on GSI that indicates psychopathology. There also no association between psychopathology with economic status in this study ($p=0.168$). Twenty participants had a very satisfied academic performance versus 11 satisfied and 11 unsatisfied performance scored 61 and more on GSI. There are association between psychopathology and students' academic performance.

4. Discussion

The participants recruited in this study were medical students in sixth semester. Marcus documented that the third year of medical school were the time when sensitive students become overwhelmed at the impossibility of their tasks and makes them vulnerable. Many students transform from thoughtful and caring to cold, hardened and aggressive but numb to the feelings of worthlessness and vulnerability inside of their mind (Attwell, 2009). Almost all the participants were at the same age (18 years old) and none of them were married.

This study focused on assessed psychopathology of medical students using Symptom Check List 90 and to find if there association between psychopathology and gender, economic status and students' academic performance. Overall 60% of participants scored GSI 61 or more that indicates psychopathology. This result is consistent with prior study by Biro et al in 2009 who revealed that psychopathology were higher significantly on samples consist of medical students, 76% of samples had scored above threshold compared to peers. Medical students must faced many problems and they becomes burnout and can't cope with it. Family and interpersonal problems, financial concerns, assignments, working with cadavers and constant pressure of maintaining good grades were identified as the most common stress triggers. About 15-29% students feel impaired by examinations (Tosevski, Milovancevic and Gajic, 2010).

This study did not found association between gender. This result similar with prior study by Firth in 1986 that there was no evidence to suggest the association. Psychopathology are often found in female, similar to our finding, which could be because female seems to experiences more stressful events or are more willing to admit it (Firth, 1986; Nojomi and Gharayee, 2007; Dyrbye, Thomas and Shanafelt, 2006).

Our study revealed that psychopathology mostly found in participants with economic status satisfied and there was no association between psychopathology and economic status. This result did not in line with other study by Nojomi and Gharayee where they reported that participants with poor economic status scored GSI that indicates psychopathology (Nojomi and Gharayee, 2007). This difference could be because of limitation in our study. Economic status were measured by self-report where participants declared their economic status based on how they felt and were given options satisfied and unsatisfied.

Students' academic performance were ranked based on rector of University of Sumatera Utara decision on medical undergraduate academic regulations where the semester GPA < 2.5 were ranked unsatisfied, 2.5-2.99 were satisfied and 3-4 were very satisfied (Fakultas Kedokteran Universitas Sumatera Utara, 2010). In this study

we found that students' academic performance were associated with psychopathology. Similar with study by Al-Qaisy that found a positive relationship between anxiety as one of a psychopathology scale and academic achievement of students, and this suggest that whenever students have a medium level of concern, the higher their academic achievement will be (Al-Qaisy, 2011). Students felt academic pressure due to frequent academic examination in a competitive environment (Khan, Mahmood, Badshah, Ali and Jamal, 2006). But contrary, Salami reported in his study that there was no direct relationship between psychopathology and academic performance. This could be as a part from fact that psychopathology affects negatively students' motivation to learn, use of good study method, and self-efficacy which leads to decrements in academic performance (Salami, 2008).

5. Strength and Limitation

This study is a first study that had been conducted in medical college in University of Sumatera Utara. This result can be used as a screening and detect student's mental health and anticipate the next plan for student's well-being. The generalizability of the study is limited, which the participants only recruited from one single medical college. Cause-effect association can not be determined from this study. The other limitation was we did not measure every scale that includes in the nine scales of Symptom Check List 90. We only identified psychopathology in overall.

Any type of mental illness can affect individual and society, including medical school dropout, suicide, deterioration in relationships, marital problems and impaired ability to work effectively (Khan, Mahmood, Badshah, Ali and Jamal, 2006). Hence, the challenges to all medical colleges are to promote student well-being and provide students with the coping tools to deal with stress throughout their medical education (Khan, Mahmood, Badshah, Ali and Jamal, 2006; Jadoon, Yaqoob, Raza, Shehzad and Choudhry, 2010). Coping strategies have been shown to vary by region, community, social groups, gender, age and time. This is greatly influenced by individual's personal experiences (Kate, Kulkarni, Shetty, Deshmukh and Moghe, 2010).

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