Association of Self-Esteem with Burnout Syndrome Incidence among Undergraduate Medical Students at a Private Medical University in Banten Province, Indonesia

Neneng Suryadinata[1], Paulus Mario Christopher[2], Patricia Budimulia[3]

[1]Faculty of Medicine, Pelita Harapan University, Banten, Indonesia
Corresponding author Email: *neneng.suryadinata[at]uph.edu*

[2]Faculty of Medicine, Pelita Harapan University, Banten, Indonesia
paulusmarioc[at]gmail.com

[3]Faculty of Medicine, Pelita Harapan University, Banten, Indonesia
patbudmul[at]gmail.com

Abstract: *Background: Burnout syndrome is a psychological construct characterized by emotional exhaustion, cynicism, and academic efficacy. Medical students may experience burnout syndrome leading to emotional and physical exhaustion and detachment. Aim: To analyze the association of self-esteem and burnout syndrome incidence among undergraduate medical students at a private university in Banten Province, Indonesia. Material and Methods: We conducted a cross-sectional survey using the Rosenberg Self-Esteem Scale (RSES) to assess self-esteem and Maslach Burnout Inventory-Student Survey (MBI-SS) to assess burnout syndrome among third-year undergraduate medical students at a private medical university in Banten Province, Indonesia. Statistical analyses were performed with SPSS software, version 21.0. Results: Of the 88 medical students, self-esteem analysis revealed that the majority of the respondents had medium-to-high self-esteem (80.7 and 5.7%, respectively), yet 82 (93.2%) of the respondents reported a burnout incidence. Association between respondents' self-esteem and burnout incidence has shown to be statistically significant (P-value = 0.001). Conclusions: Self-esteem plays arolein the incidence of burnout syndrome among medical students. This study may be used as a guide for improving a better justification of screening and prevention, intervention to augment their self-esteem, and, subsequently, decreasing the burnout incidence.*

Keywords: Medicine, Students, Burnout, MBI-SS, Self-esteem, RSES

1. Introduction

Burnout syndrome is a psychosocial syndrome constituted of a triad involving level of emotional exhaustion (EE), cynicism (CY), and/or a reduced level of self-achievement due to the failure to attain a particular requirement or academic efficacy (AE)[1]. Burnout syndrome affects an increasing number of healthcare professionals; however, this phenomenon has revealed that medical students are affected by this syndrome. This type of burnout is classified as learning or academic burnout, also known as academic-induced burnout, and only affects students[2].

Although students are not workers in the traditional sense, psychology views them as engaging in scheduled activities, such as attending class and submitting assignments as "work." There is growing acknowledgment that students exhibit burnout symptoms and experience significant degrees of burnout. Highlighting burnout syndrome is essential for several reasons, as burnout syndrome may be a principle for understanding student behaviors during their studies, influencing their interpersonal relationships (e.g., with other students, lecturers, and others), and the general reputation of the institution [3].

Studies determining the prevalence of burnout syndrome have not only related it to demographic variables (gender, age, years of professional experience, and so forth) but also to other constructs. One of the proposed individual variables correlating to burnout is the level of self-esteem[4]. A study in Spain reported a significant difference in burnout scores, especially among professionals with low self-esteem[5]. In Indonesia, only a few published reports have been published, and data concerning the association between self-esteem with burnout incidences were limited nor made readily accessible. This study aimed to analyze the extent of self-esteem with burnout syndrome incidence among undergraduate medical students at a private medical university in Banten Province, Indonesia.

2. Materials and Methods

Sampling procedures and participants
This cross-sectional study was performed from January to May 2019. Respondents were third-year undergraduate students of the medical study program at the Faculty of Medicine Pelita Harapan University. The online questionnaire was spread during the academic semester. They were strongly encouraged to fill out the questionnaire; however, their participation remained voluntary. Data were anonymized before analysis by de-identifying patient data. The study protocol was approved by the Ethics Committee of the Faculty of Medicine, Pelita Harapan University (Ref:

201/K-LKH/ETIK/XII2018). Respondents were informed about the study and e-informed consent was obtained prior.

Questionnaire

An *ad hoc* questionnaire for collecting participant socio-demographic data. The Maslach Burnout Inventory-Student Survey (MBI-SS) was utilized to measure burnout, while the Rosenberg self-esteem scale was used to assess self-esteem. The MBI-SS (Mind Garden Inc., Menlo Park, CA), a validated tool utilized to assess burnout in student populations, consists of three subscales to assess the various aspects of burnout: emotional exhaustion (i.e., draining of emotional resources due to demanding interpersonal contacts), cynicism (i.e., negative, callous, and cynical attitude towards the recipients of one's care or services), and academic efficacy (i.e., propensity to assess one's accomplishments negatively)[6], [7]. Responses will be allotted on a 7-point Likert scale, with higher values representing a higher frequency of occurrences. Higher scores indicate burnout for CY and EE and lower scores for AE[8].In a previous study, the internal consistency reliability questionnaire measured by Cronbach's alpha was 0.838, 0.844, and 0.875 for EE, CY, and AE, respectively[9].

The Rosenberg Self-Esteem Scale (RSES) is the most popular tool for measuring self-esteem. It is a one-dimensional tool concentrating on the perception of individual self-esteem on their value. The scale consists of 10 one-dimensional items on a 4-point scale (1 representing strongly disagree to 4 representing strongly agree) with five positive and five negative graded statements[10]. Scores range between 10-40and the highest score indicates the highest level of self-esteem[11].In a previous study, the internal consistency reliability questionnaire measured by Cronbach's alpha was 0.85[12].

Statistical analysis

The data collected from the questionnaires were entered into Excel files (Microsoft Excel, Microsoft Corp. Redmond, WA, USA). Descriptive and inferential analyses were performed. Statistical analyses were performed using Statistical Package for Social Sciences (SPSS) Statistics Version 21.0 (IBM Corp., Released 2012, Armonk, NY, USA). For analytical purposes, the components of burnout syndrome and self-esteem were categorized into three divisions; 1) low- (EE score of 0-9; CY score of 0-1; AE score of ≤ 22; and RSES score of <15), 2) medium- (EE score of 10-14; CY score of 2-6; AE score of 23-27; and RSES score of 15-25), and 3) high self-esteem (EE score of >14; CY score of >6; AE score of ≥ 28; and RSES score of >25).Combining high EE and CY with/without low AE is considered burnout. Bivariate analyses were performed using Chi-square with a level of statistical significance at 0.05.

3. Results

The sample comprised 88 under graduate medical students from Pelita Harapan University, Banten Province, Indonesia. The majority of the respondents were female (72.7%), aged 20 (63.6%), and not in a relationship (71.6%). Self-esteem analysis revealed that the majority of the respondents were having medium-to-high self-esteem (80.7 and 5.7%, respectively), yet 93.2% of the respondents reported a burnout syndrome incidence. Association between respondents' self-esteem and burnout syndrome incidence has shown to be statistically significant (P-value = 0.001). However, gender, age, and relationship status were not statistically significant (P-value > 0.05) (**Table 1**).

Table 1: Association between respondents' socio-demographic, self-esteem status, and burnout syndrome incidence

Variable/ Category	Burnout Syndrome Incidence		P value
	Present (n = 82)	Absent (n = 6)	
Gender			
Male	24 (100.0)	0 (0.0)	0.120
Female	58 (90.6)	6 (9.4)	
Age (years old)			
19	7 (77.8)	2 (22.2)	0.562
20	53 (94.6)	3 (5.4)	
21	18 (94.7)	1 (5.3)	
23	2 (100.0)	0 (0.0)	
24	1 (100.0)	0 (0.0)	
25	1 (100.0)	0 (0.0)	
Relationship status			
Not in a relationship	59 (93.7)	4 (6.3)	0.782
In a relationship	23 (92.0)	2 (8.0)	
Self-esteem status			
Low	12 (100.0)	0 (0.0)	0.001
Medium	70 (98.6)	1 (1.4)	
High	0 (0.0)	5 (100.0)	

4. Discussion

The healthcare industry has been proven to be prone to the development of burnout syndrome due to their interactions with patients and their families. Various profiles of healthcare professionals have been defined based on their self-esteem, empathy, and social support [5]. Due to the absence of a generally accepted definition of burnout syndrome, its multifactorial origin and the vagueness and subjectivity of the diagnostic criteria, it is difficult to obtain a clear and correct overview of burnout[13]. A meta-analysis of burnout in medical students reported a 37.23% overall prevalence rate with a prevalence of emotional exhaustion, depersonalization, and personal accomplishment of 38.08%, 35.07%, and 37.23%, respectively[14]. This finding contradicts our study, which reported a higher percentage (93.2%) of burnout syndrome incidence among medical students. This phenomenon may be attributed to the need for more diversification of respondents from varying academic years.

Among the studied demographic variables in the current study, both gender and age were not significantly associated with burnout syndrome incidence. These findings align with other studies that found no association between gender and age toward burnout[15], [16]. Although it was not statistically significant, female medical students were more prone to experience 'burnout' than male students, as in our study. A possible explanation is that medical school may put students under gender-specific strain or they may have personal traits that make them more susceptible to exhaustion. The burden of extracurricular activities may be

more significant for female students. Additionally, exhaustion rates peak in the third year, when medical students take on long-lasting and demanding studies. It is reasonable to require medical students to be well-motivated and invested[17].

Self-esteem was another individual element that contributed to the appearance of burnout syndrome. Self-esteem is a general assessment of one's sense of self-worth and self-assurance. It symbolizes the sensation of being able to overcome life's problems effectively. According to research conducted in Korea, students with negative attitudes toward themselves demonstrated a higher level of academic burnout[18]. This finding is in accordance with this study, where low-to-medium self-esteem has a higher incidence of burnout syndrome. Lower self-esteem predicted more mental and physical illness, and students with lower self-esteem tended to have more negative feelings and lower self-esteem in academic performance[19].

Burnout syndrome among medical students should raise awareness as it may lead to personal and professional consequences. Personally, it may lead to suicidal ideation, a greater sense of stigma regarding mental health problems, and motor vehicle incidents. In terms of professionally, it may decrease empathy, cheating/ dishonest behaviors, problems identifying and managing conflicts of interest, decreased altruistic professional values, inappropriate prescribing behaviors, decreased personal accountability regarding impaired colleagues, dropping out of medical school, influence on specialty choice, suboptimal patient care, medical errors, and reduced medical knowledge[20].

5. Conclusions

Our findings highlighted one factor contributing to burnout syndrome incidence among medical students at a private medical university in Banten Province, Indonesia, that could be targeted for improving a better justification of screening and prevention, intervention to augment their self-esteem, and, subsequently, decreasing the burnout syndrome incidence.

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