Association of self-esteem with demographic characteristics of medical students: A cross-sectional study.

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Abstract

Objectives: The objectives of this study were to assess the prevalence of low self-esteem and to determine the association of self-esteem with demographic characteristics of medical students.

Methodology: A cross-sectional study was carried out among medical students of Liaquat Medical Hospital, Jamshoro, which included students from second to the final-year MBBS. All data were collected through interviews. To determine self-esteem, Rosenberg's self-esteem scale was utilized, which is regarded as a highly reliable and valid tool for the quantitative assessment of self-esteem. The Statistical Package for Social Sciences (SPSS) version 20 was used for data analysis. Multi-variable analysis of associations between student's characteristics and self-esteem was performed using logistic regression, keeping a p-value of <0.05 as statistically significant.

Results: From a total of 240 medical students, 153 (63.7%) were females, while 87 (36.3%) were males. The majority (n=126, 52.5%) of students aged 22 years or above, 68 (28.3%) were in the third-year while 99 (41.3%) were in the fourth-year, while 152 (63.9%) lived in the joint family system. Moreover, 59 (24.6%) of the students showed low self-esteem. A significant association of self-esteem was found with the educational year of the students, with students who were in the fourth-year had significantly higher odds of having normal/high self-esteem than students who were in the second-year (AOR=3.252; 95% CI=1.180 and 8.964; p-value=0.023). All other year students were observed to have an insignificant association with self-esteem in terms of age, gender, and family system.

Conclusion: Association of self-esteem with the only educational year of the medical students was found to be significant, while with gender, the association of self-esteem was found to be insignificant.

Introduction

Self-esteem, an evaluation of an individual about one's self, is substantially owed to the fact that how one is perceived by other individuals and makes up a perception regarding one's self [1]. As such, feedback is quality that is attained from the social environment and tends to have a substantial effect on a person's functioning. Therefore, negative feedback leads to detrimental consequences on one's self-esteem [2]. As a result, it might be logically sound to have an assumption regarding self-esteem to be a powerful source in the fight against suicidal tendencies and social stressors [3].

Studies have been reported in the literature showing an inverse relationship between social life stressors and self-esteem. Psychiatric diseases such as depression and anxiety have been frequently linked with noticeable deficiencies in self-esteem [4]. The complexity is as such that it is important to identify the cause of such self-esteem, to tackle it, accordingly. Low self-esteem is regarded as a strong predictor for suicidal tendencies. Consequently, improvement in mental health and tackling stressors positively can affect a person's self-esteem and is pivotal for the betterment of the person's self-esteem [5].

Not only others, but the perception of people themself affects their self-esteem, and the occurrence of any negative event in life is also important in determining self-esteem. Adaptation to a negative event and turning it into a positive future is, therefore, of utmost importance [6]. It depends upon sentiments, considerations, as well as practices of an individual. Self-esteem, the measurement of an individual's worthiness in their own eyes, also impacts on how they deal with upsetting situations [7]. High self-esteem is described as a valuable asset in adaptations towards positivity in life. Studies have reported that medical students with high self-esteem show better results in academics as well as extra-curricular activities [8].

It is seen that the medical field requires hard work day in and day out regardless of the circumstances, however, negative events in life or poor self-esteem of a medical student may lead to detrimental effects on the academic performance as well as the mental health [9]. Therefore, it is highly important to identify such students who have self-esteem issues and not only to determine the cause of the low performance but through proper guidance, help them to tackle those issues, and overcome them [10]. However, this area of specialty has been highly under looked in developing countries such as Pakistan, where a high prevalence of low self-esteem has been seen especially among medical students. To the best of authors' knowledge, the existing local literature is scarce to determine any progress on the self-esteem issues among medical students. As a result, this study was undertaken to assess the prevalence of low self-esteem and to determine the association of self-esteem with demographic characteristics of medical students.

Patients and Methods

After taking ethical approval, this cross-sectional study was carried out among the medical students of Liaquat Medical Hospital Jamshoro. Students from second to final-year MBBS were included in the study. Taking the percentage frequency of the study outcome as 50% for a liberal estimate, with a 95% confidence level and 6.5% precision, the minimum required sample size was calculated to be 228 participants.

All relevant study data were collected through interviews using a questionnaire designed specifically for the study. To determine the self-esteem of the medical students, Rosenberg's Self-Esteem Scale (RSES) was utilized. This scale quantifies the self-esteem of the respondents through certain questions about their current feelings. RSES is regarded as a highly reliable and valid tool for quantitative assessment of self-esteem.

The Statistical Package for Social Sciences (SPSS) version 20 was used for data analysis. Reported demographics included age, gender, educational year, and family system. Descriptive analysis was performed by calculating frequencies and percentages, while inferential analysis was performed using logistic regression to develop a risk assessment model for the study outcome keeping a p-value of <0.05 as statistically significant.

Results

Data of a total of 240 participants were analyzed for the study. Out of these 240 students, 114 (47.5%) were up to 21 years old, while 126 (52.5%) were 22 years old or older; 87 (36.3%) were males, while 153 (63.75) were females; 25 (10.4%) were in the second-year, 68 (28.3%) were in the third-year, 99 (41.3%) were in the fourth-year, while 48 (20.0%) were in the final year, and 86 (36.1%) lived in the nuclear family, while 152 (63.9%) lived in the joint family system (Table 1). Moreover, 59 (24.6%) of the students showed low self-esteem, 171 (71.3%) showed normal self-esteem, while only 10 (4.2%) showed high self-esteem.

Table 1: Participants profile.

Variables (n=240)	n (%)
Age	
up to 21 years	114 (47.5)
22 years or above	126 (52.5)
Gender	
male	87 (36.3)
female	153 (63.7)
Educational year	
second year	25 (10.4)
third year	68 (28.3)
fourth year	99 (41.3)
final year	48 (20.0)

Family system1	
nuclear	86 (36.1)
joint	152 (63.9)
1n=238	

The result of the multi-variable analysis of associations between participant characteristics and self-esteem revealed that among participant's age, gender, educational year, and the family system showed that only the educational year was significantly associated with the self-esteem of the participants.

The students who were in the fourth-year had significantly higher odds of having normal/high self-esteem than students who were in the second year (AOR=3.252; 95% CI=1.180, 8.964; p=0.023).

Moreover, females were found to have higher odds of having normal/high self-esteem than males, while those living in the nuclear family were found to have higher odds of having normal/high self-esteem than those living in the joint family system, though the odds were statistically non-significant in both these instances (Table 2).

*Table 2: Multivariable analysis of associations between participant characteristics and self-esteem.*

variables	OR (95% CI++)	P-value
Age (Up to 21 years vs 22 years and above)	1.130 (0.549-2.329)	0.740
Gender (female vs male)	1.499 (0.778-2.888)	0.227
Academic year (third vs second)	1.899 (0.686-5.255)	0.217
Academic year (fourth vs second)	3.252 (1.180-8.964)	0.023*
Academic year (final vs second)	3.286 (0.946-11.417)	0.061
Family system (nuclear vs joint)	1.733 (0.885-3.397)	0.109
*p-value <0.05 is considered significant		
+**OR**=Odds Ratio		
++**CI**=Confidence Interval		

Discussion

Self-esteem plays a vital role in a person's life, specifically when exposed to pressurized environments [11]. The current study showed that the association between student's age and self-esteem was insignificant (p-value=0.74). Similarly, the association between gender and self-esteem was also insignificant (p-value=0.227). Likewise, the association of self-esteem with the family system was insignificant as well (p-value=0.109). The only educational year was found to be significantly associated with the self-esteem of the participants were students who were in the fourth year had significantly

higher odds of having normal/high self-esteem than students who were in the second-year (p-value=0.023)(Figure 1).

Figure 1. Level of self-esteem.
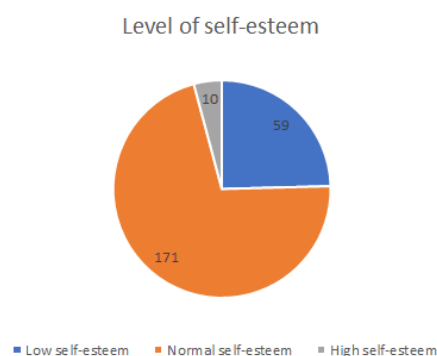
Fourth year medical students were noted to have better or normal self-esteem in comparison to lower year students. In any way, transiting from high school to a university possesses a major challenge and is a life changer [12]. Initially the university life may seem to be a source of stress and strain, however, acutely. Life in the university tends to be demanding due to ever-increasing academic load on the students [13]. Although the issue of low self-esteem is a major one, yet scarce literature is available in Pakistan regarding the role of demographic variables in affecting self-esteem among medical students [14]. A lot of research is required in this field, especially among medical students, so that factors can be identified that can help these health professionals to improve their self-esteem [15]. And so different mental health issues can also be identified and dealt with, especially in terms of age, gender, and educational years [16]. Among a few Pakistani studies done on the general population, middle-aged individuals were reported to be at higher risk for self-esteem and its related problems [17]. Another study reported that females show more pre-disposition to self-esteem issues than males [18]. However, a contrasting study found males to have higher pre-dominance in terms of self-esteem related issues than females [19]. Nonetheless, in our study and others as well, the ratio of male to female was unequal to determine an accurate association in this regard. An astonishing finding of a study reported highly educated individuals to be at higher risk for self-esteem issues than individuals with lower levels of education.

Being a single centered study, with limited sample size, and with an imbalance between male and female participants, were few of the limitations of this study. Future multi-centered studies are needed to identify the causes of low self-esteem, and how to diagnose and counter this issue to better generalize such findings on the population of medical students.

Conclusion

According to the results of the study, the association of self-esteem with the only educational year of medical students was found to be significant, while other demographic characteristics of the medical students did not have a significant association with their self-esteem.

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