SHORT COMMUNICATION

Assessment of the relationship between self-esteem and academic score of undergraduate medical students of Azad Kashmir, Pakistan

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Abstract

A cross-sectional observational study was performed at the Poonch Medical College, Azad Kashmir, Pakistan, from June 2018 to June 2019 to assess the relationship between self-esteem and the academic score of undergraduate medical students. Rosenberg Self-Esteem (RSE) scale was used as data collection tool. The study questionnaire was electronically distributed to all 500 students enrolled in the Bachelor of Medicine and Surgery (M.B.B.S) programme out of which 253 submitted the questionnaire (response rate: 50.6%). The mean academic score of all students was 66.61± 5.42 and the mean RSE score was 28.66± 3.98). A statistically significant correlation was not found between age, academic score, and RSE score. Female students had slightly higher academic performance scores and RSE scores compared to the male students, but this difference was not statistically significant. Future studies are required to assess the contributing factors responsible for better academic performance.

Keywords: RSE scale, Academic performance, Medical student, Pakistan.

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Introduction

Self-esteem is a common and vital construct in the social sciences and everyday life.[1] It refers to the positive or negative attitude to one's own personality.[2] Self-esteem is a fundamental and primary need for every human.[3] Low self-esteem can ultimately be a causative factor for anxiety, clinical depression, and suicidal tendency.[2] It can also cause a high level of academic stress and poor academic performance.[4,5] Students with a high level of self-esteem can easily deal with academic challenges and demands compared to their counterparts but high self-esteem can create stress among students because failure is not an option in their academic life.[6] But interestingly, a few previous studies have revealed that academic score was not significantly affected by self-esteem.[7,8] Therefore, the relationship between these two factors is still inconclusive and debatable.

Rosenberg recommended that in order to decrease self-esteem among undervalued social minorities four conditions must be present. These conditions are awareness, agreement, personal relevance, and significance. First, an individual must identify the group with negative interpretations and awareness. It could be the larger or smaller population. Then the individual has to agree with these negative assessments (agreement). Furthermore, the individual must accept that these negative societal assessments apply to the self (personal relevance). Lastly, the individual must be worried about society's assessments (significance).[2] The concepts of esteem and stress are closely related.[9] Academic tension or stress is a multifactorial mental condition often mentioned by the students. It is believed that mental well-being and self-esteem are influencers of academic stress experienced by most of the students at some point of their academic life.[10]

After an extensive literature search, we could not find any recent Pakistani study that measured the association between self-esteem and the academic score of undergraduate medical students. Hence, this study was undertaken to assess how self-esteem affects the academic performance of undergraduate medical students of the Azad Kashmir region of Pakistan.

Methods and Results

This cross-sectional observational study was conducted from June 2018 to June 2019 at Poonch Medical College, Rawalakot, Azad Kashmir. The data collection tool was the validated Rosenberg self-esteem scale questionnaire first described in 1965.2 RSE scale is a ten-item four-points Likert scale questionnaire to measure self-esteem score. The questionnaires were electronically distributed to all 500 students of Bachelor of Medicine and Surgery at the Poonch Medical College. Out of them, 253 students completed and submitted the questionnaire, making a response rate of 50.6%. Informed consent was secured from all students included in the study. The ethical review committee of Poonch Medical College provided ethical approval for this study.

Data were descriptively presented in Mean±SD,

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frequencies, and percentages. The Rosenberg self-esteem questions were interpreted as follows: strongly disagree (1 point), disagree (2 points), agree (3 points), and strongly agree (4 points). Reverse coding was done for the negatively marked RSE questions (items number 3, 5, 8, 9, and 10). The Cronbach Alpha value of RSE items for this study was .685. The mean RSE score for all respondents and respondents' split by baseline characteristics (gender and academic year) were presented. The academic score was represented by the percentage achieved in the most recent annual exam (intermediate exam for first year students and annual professional exam for other years of medical students). The academic score and RSE scores were checked for normality and were noted to be non-normally distributed. The mean academic score and RSE score were compared between males and females by the Mann-Whitney U test. The mean academic score and RSE score was compared across the academic year by the Kruskal Wallis H test. Finally, the correlation between age, academic score, and RSE score was detected by the Spearman correlation test. The data analysis was done in 95% CI using SPSS V 23.0.

The participants' demographics are shown in Table-1. Respondents' answers to all RSE questions are shown in Table-2. The item specific highest mean score (3.20±0.71) was observed for item number one. The lowest mean score (2.10±0.86) was observed for item number eight. Female students (2.18±0.90) scored significantly higher than the male students (1.88±0.72) against item number eight, *p*-value 0.024. In contrast, males scored significantly higher (2.85±0,83) than females (2.57±0.89) for item number ten, *p*-value 0.031. (Table-3)

The mean academic score for all students was 66.61±5.42, and the mean RSE score for all students was 28.66±3.98. The mean RSE score and academic performance of females were slightly higher than the males but the mean academic score and RSE score between males and females, and between academic years were not significantly different (*p*> .050) (Table-4, 5).

Table-1: Baseline characteristics of all respondents (n = 253).

Characteristics	n (%)
Gender	
o Male	65 (25.7)
o Female	188 (74.3)
Academic year	
o First-year	1 (0.4)
o Second-year	55 (21.7)
o Third-year	76 (30.0)
o Fourth-year	49 (19.4)
o Fifth-year	72 (28.5)
Age in year (mean ± SD)	22.29±1.50

Table-3: Respondents' mean scores against Rosenberg self-esteem questions.

S.No.	All respondents Mean±SD	Male respondents Mean±SD	Female respondents Mean±SD	*p*-value
1	3.20±0.71	3.15±0.71	3.21±0.71	0.553
2	3.08±0.72	3.15±0.64	3.06±0.74	0.498
3*	3.16±0.69	3.18±0.73	3.15±0.69	0.603
4	3.10±0.76	3.00±0.66	3.13±0.79	0.089
5*	2.74±0.86	2.66±0.85	2.76±0.86	0.333
6	3.11±0.72	3.03±0.77	3.13±0.70	0.422
7	3.11±0.73	3.20±0.69	3.07±0.75	0.269
8*	2.10±0.86	1.88±0.72	2.18±0.90	0.024
9*	2.43±0.83	2.51±0.79	2.41±0.84	0.328
10*	2.64±0.88	2.85±0.83	2.57±0.89	0.031

* Reverse coding was done

Table-4: Baseline characteristics of all respondents (n = 253).

Characteristics	Academic score Mean±SD	*p*-value
Gender		
o Male	65.73±6.27	0.153
o Female	66.91±5.09	
Academic year		
o First year	85.00±0.00	0.311
o Second year	65.53±5.54	
o Third year	66.74±4.98	
o Fourth year	66.73±4.77	
o Fifth year	66.96±5.83	

Table-2: Distribution of all respondents by their answers to the Rosenberg self-esteem questions. (n = 253).

S. No.	Questions	Responses n (%)			
		Strongly disagree	Disagree	Agree	Strongly agree
1	I feel that I am a person of worth, at least on an equal plane with others.	6 (2.4)	25 (9.9)	135 (53.4)	87 (34.4)
2	I feel that I have a number of good qualities	7 (2.8)	34 (13.4)	143 (56.5)	69 (27.3)
3	All in all, I am inclined to feel that I am a failure.	79 (31.2)	140 (55.3)	29 (11.5)	5 (2.0)
4	I am able to do things as well as most other people.	10 (4.0)	31 (12.3)	136 (53.8)	76 (30.0)
5	I feel I do not have much to be proud of.	53 (20.9)	95 (37.5)	90 (35.6)	15 (5.9)
6	I take a positive attitude toward myself.	9 (3.6)	26 (10.3)	147 (58.1)	71 (28.1)
7	On the whole, I am satisfied with myself.	8 (3.2)	32 (12.6)	138 (54.5)	75 (29.6)
8	I wish I could have more respect for myself.	17 (6.7)	57 (22.5)	113 (44.7)	66 (26.1)
9	I certainly feel useless at times.	23 (9.1)	96 (37.9)	102 (40.3)	32 (12.6)
10	At times I think I am no good at all.	42 (16.6)	106 (41.9)	78 (30.8)	27 (10.7)

Table-5: Relationship between self-esteem score and baseline characteristics.

Characteristics	RSE score Mean±SD	*p*-value
Gender		
o Male	28.62±3.44	0.906
o Female	28.68±4.16	
Academic year		
o First year	24.00±0.00	0.151
o Second year	28.13±3.88	
o Third year	28.16±4.16	
o Fourth year	29.57±3.27	
o Fifth year	29.06±4.20	

* The mean RSE score for all respondents was 28.66 ± 3.98; RSE= Rosenberg self-esteem.

Table-6: Correlation between age, academic score, and RSE score.

		Academic score	RSE score
Age	Correlation coefficient	-0.035	0.079
	p-value	0.575	0.210
	n	252	253
Academic score	Correlation coefficient	1	0.024
	p-value		0.699
	n		252

RSE= Rosenberg self-esteem

No statistically significant correlation was observed between age, academic year, and RSE scores ($p>0.050$). (Table-6).

Discussion

The current study could not find a significant relationship between the Rosenberg self-esteem score and the academic performance of undergraduate medical students. Moreover, there was no difference between gender and academic year in terms of RSE score and academic performance. This means that academic performance depends on other factors. Further studies can be carried out to identify the factors responsible for higher academic performance. A few previous studies have also shown similar results.[7,8]

There was a significant difference in the scores of males versus females for two items in the RSE scale (Item 8, and 10). These two items were negatively marked in the RSE scale. Female students felt a need for more respect and they also had more depressive thoughts compared with the male students. Future studies need to be carried out to identify why female students felt this way. A previous Iranian study revealed a self-esteem score of 19.8±5.2 which is lower than the current study but the Iranian study had involved high school students.[3] Therefore, these two studies are not directly comparable. Another study including undergraduate medical students showed the RSE score between 26 to 30 for most of the students.[11] This means, the RSE score of medical students in Azad Kashmir is not very low but how it relates to the academic performance is not clear. Due to the scarcity of similar local studies, the findings of this study could not be compared against a recent Pakistani study that used the RSE scale to measure the self-esteem level of the medical students. The failure to find a link between the Rosenberg self-esteem score and academic performance of undergraduate medical students warrants further investigations to determine the relationship.

The mean academic score was 66.61±5.42%. There should be plenty of opportunities to improve this score. The current study recommends further studies to identify the factors that are more related to academic performance. This study had several limitations, some of which are: it was a single centred study, the study sample distribution was not uniform across the academic years, convenient sampling technique, and the nature of the study was cross-sectional observational. Due to these limitations, the findings of this study may not be generalised.

Conclusion

No significant relationship between self-esteem of the undergraduate medical students and their academic performance could be established. However, several important observations were noted. For example, the female students had higher academic performance, although they felt less respect for themselves and they had more depressive thoughts as compared to the male students. More studies should be done to ascertain the actual relationship between self-esteem and academic performance among medical students.

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