

# Self-Esteem and Academic Performance among Undergraduate Medical Students in Nepal: A Cross-Sectional Study

Harikala Ghimire,<sup>1</sup> Rachita Ghimire,<sup>1</sup> Nikita Yadav,<sup>1</sup> Priyanka Sharma,<sup>1</sup> Nabu Praveen,<sup>1</sup> Reiha Kiran Basnet,<sup>1</sup> Dilip Sharma Banjade,<sup>1</sup> Buddhi Raj Pokhrel<sup>1</sup>

<sup>1</sup>Universal College of Medical Sciences and Teaching Hospital, Rupandehi, Nepal.

## ABSTRACT

**Introduction:** Self-esteem is related to self-worth which fuels motivation, productivity, and efficacy which is considered of high value in academic performance. However, no such studies have been published in Nepal.

**Objective:** We aimed to investigate the association between self-esteem and academic performance of medical undergraduates in Western Nepal.

**Results:** This analytical cross-sectional study was carried out among 226 undergraduate medical students. The majority of the participants had high self-esteem with a median self-esteem score of 29. The female participants had higher scores as well as academic performance than males. We found no association between self-esteem and academic performance.

**Conclusions:** We found no significant relationship between self-esteem and the academic performance of medical undergraduates.

**Keywords:** Academic performance, medical students, rosenberg self-esteem scale, self-esteem.

## INTRODUCTION

Self-esteem is a form of self-appraisal with the idea of representing core self to establish a healthier relationship with others through self-verification.<sup>1,2</sup> High self-esteem helps create goals, provide the rationale for the course of action, and maximize the sense of security. Similarly, inadequate self-esteem can create a sense of worthlessness, limiting a person's goals and achievements.<sup>3-5</sup> Low self-esteem is even considered one of the major criteria for diagnosing depression.<sup>6</sup> Self-esteem can be affected by various factors such as age, sex, socioeconomic status, and ethnicity.<sup>7-9</sup>

Academic achievement refers to the ability of an individual in school courses measured using standard

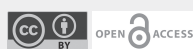
examinations.<sup>10</sup> Its relationship with self-esteem has been considered crucial. The association, however, remains debatable.<sup>11,12</sup> Various studies have reported that the best way to improve students' achievement is to increase their self-esteem.<sup>13,14</sup> The positive association between self-esteem and academic performance does not necessarily indicate that high self-esteem always leads to better performance. Rather, high self-esteem could merely be the result of good school performance.<sup>12, 15</sup> Many studies have demonstrated no significant association between self-esteem and academic achievement.<sup>16, 17</sup>

The differences in academic performance among individuals are attributed to personality, intelligence, self-esteem, and cognitive factors among others. No relevant studies regarding the association of self-esteem with the academic performance of students have been conducted in Nepal. With this background, we aim to investigate the relationship between self-esteem and academic performance of medical students in Western Nepal.

### Correspondence

Rachita Ghimire

Email: [rasita.mysticgirl@gmail.com](mailto:rasita.mysticgirl@gmail.com)



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## METHODS

This questionnaire-based analytical cross-sectional study was conducted among 226 MBBS students of the Universal College of Medical Sciences and Teaching Hospital (UCMS-TH), Rupandehi, Province No.5, Nepal. All the participants from the first to final year of their academic calendar were considered for the study.

The online questionnaire forms, along with the consent form, were distributed among the students via Google form and the responses were saved. The study was conducted from August 26, 2021, to October 30, 2021. Ethical approval for the study was obtained from the Institutional Review Committee (IRC) of UCMS-TH before the study (IRC no.091/21). A convenience sampling technique was used.

Self-esteem was estimated by using the Rosenberg self-esteem scale (RSES).<sup>16</sup> The RSES scoring system consists of ten specific questions answered on a four-point Likert scale from 'strongly agree' to 'strongly disagree'. The scoring of the test was performed as follows: strongly agree-4, agree-3, disagree-2, and strongly disagree-1. Self-esteem was classified as low (0-15), normal (16-25), and high (26-30). The ten items of the RSES questionnaires are listed in table 1. The academic performance of the participants was evaluated by the percentage

obtained from their latest academic exam. The performance was categorized as good (>70%) and average ( $\leq$ 70%).

Other study variables included the current academic year, gender, socioeconomic status, religion, nationality, and ethnicity. The socioeconomic status of the participants was assessed by using the Modified Kuppaswamy Scale.<sup>19</sup> The scale takes into account education, occupation, and family income (per month in NRs) and scores them accordingly. The socioeconomic status is then classified as upper, upper-middle, lower-middle, upper-lower, and lower. The classification of ethnicity was based on the follow-up study to the 2006 Nepal Demographic and Health Survey (NDHS) Statistics.<sup>20</sup>

The data were analyzed using a statistical package for social sciences (SPSS vs.16). The Shapiro-Wilk test was performed to determine the normality of the data. The distribution of the RSE score deviated significantly from normal. The RSE score was therefore expressed in the median and inter-quartile range. Categorical data are presented as frequencies and percentages. The Mann-Whitney U test and chi-square analysis (Fisher's exact test and likelihood ratio test) were performed. A P-value of <0.05 was considered statistically significant.

**Table 1: The Rosenberg self-esteem scale questionnaire**<sup>18</sup>

Q1	On the whole, I am satisfied with myself
Q2	At times I think I am no good at all
Q3	I feel that I have a number of good qualities
Q4	I am able to do things as well as most other people
Q5	I feel I do not have much to be proud of
Q6	I certainly feel useless at times
Q7	I feel that I am a person of worth, at least on an equal plane with others
Q8	I wish I could have more respect for myself
Q9	All in all, I am inclined to feel that I am a failure
Q10	I take a positive attitude toward myself

## RESULTS

Out of the 550 students, only 226 (41.09%) responded. Among them 134 (59.3%) were males. The distribution of the socio-demographic parameters is shown in table 2.

The median RSE score of the participants was 29 (27-31). The minimum score was 13 and the maximum score was 40. Of the total study population, 2 (0.9%) had low self-esteem, 38 (16.8%) had normal self-esteem, and 186 (82.3%) had high self-esteem respectively.

The female participants had a significantly higher median RSE score (30) than males (28) which was statistically significant (Mann-Whitney U test;  $p=0.039$ ). The self-esteem and academic performance categories were also significantly different between genders (table 3). Self-esteem and academic performance did not vary significantly among the other socio-demographic parameters.

The RSE score was comparable between the academic performance categories (Mann-Whitney U test;  $p = 0.456$ ). Similarly, we found no significant association between academic performance and self-esteem categories (table 4).

**Table 2: Distribution of the study population.**

Socio-Demographic parameters		Frequency (n)	Percentage (%)
Gender	Male	134	59.3
	Female	92	40.7
Ethnicity	Brahmin	66	29.2
	Chhetri	19	8.4
	Madhesi	86	38.1
	Janajati	11	4.9
	Musalmaan	7	3.1
	Newar	12	5.3
	Others	25	11.1
Religion	Hindu	215	95.1
	Muslim	6	2.7
	Others	5	2.2
Nationality	Nepali	200	88.5
	Indian	26	11.5
Socioeconomic status	Lower-Middle	2	0.9
	Upper-Middle	187	82.7
	Upper	37	16.4

**Table 3: Academic performance and self-esteem by gender.**

Gender	Academic Performance		Self-esteem		
	Good	Average	High	Normal	Low
Male	44(32.8%)	90 (67.2%)	116 (86.6%)	18 (13.4%)	0 (0%)
Female	44(47.8%)	48 (52.2%)	70 (76.1%)	20 (21.7%)	2 (2.2%)
P-value	0.027*		0.038**		

\*P-value obtained from Chi-square analysis (Fisher's Exact test). \*\*P- value obtained from Chi-square analysis (Likelihood Ratio test).  $P < 0.05$  is considered statistically significant

**Table 4: Association between self-esteem and academic performance.**

Self-esteem	Academic Performance		P- Value
	Good	Average	
Low	0	2	0.619
Normal	15	23	
High	73	113	

P- value from Chi-Square analysis (Likelihood ratio test).  $P < 0.05$  considered statistically significant.

## DISCUSSION

In this study, we aimed to examine the relationship between self-esteem and academic performance among undergraduate medical students. Associations of various socio-demographic factors with self-esteem or academic performance were also examined. The female participants had significantly higher RSE scores as well as better academic performance than their male counterparts. Other socio-demographic variables did not significantly affect the self-esteem and academic performance of the participants. We found no significant relationship between self-esteem and academic performance.

Javeaed A et al recently conducted a similar study on 253 undergraduate MBBS students in Pakistan. Their average RSE score was 28.66, which is similar to our average score of 29. However, both the RSE score and academic performance were not significantly different between the sexes. They also reported no significant association between self-esteem and academic achievement of the students.<sup>17</sup> Other studies have shown a positive association between self-esteem and academic performance. Arshad M et al studied the association between self-esteem and academic performance in 80 Iranian University students. They found a significant association between academic performance and self-esteem with a very strong positive correlation. Female participants had higher academic performance whereas male participants had higher self-esteem in their study.<sup>12</sup> Similarly, Jirdehi MM et al also reported a positive association between self-esteem and academic performance. However, their method of assessing self-esteem was based on the

Cooper Smith scale which varies considerably from the Rosenberg scale used in our study. Additionally, their methods of assessing academic achievement were considerably different from ours.<sup>21</sup>

Self-esteem is a complex psychological phenomenon and is dependent on several similarly complicated factors and possible interactions between them. This makes the accurate estimation of self-esteem extremely difficult.<sup>22</sup> Nevertheless, various scoring systems to evaluate self-esteem have been advocated, of which RSE scoring is the most widely used. Its relative ease of administration, shorter duration to complete, and straightforward method of estimation have made its use incredibly popular and have been translated into several languages.<sup>23</sup> However, as mentioned above, whether it accurately represents self-esteem is still questionable.

Furthermore, various cross-cultural and geographic differences might lead to variations in the responses.<sup>24</sup> Several studies have suggested that cultural differences, especially between individualist and collectivist approaches, may have several response biases.<sup>24-26</sup> For example, Chen C et al demonstrated that Japanese and Chinese students were more likely to select the midpoint values on the Likert scale than US students.<sup>25</sup> Similar views were expressed by Song H et al but they did not deem the scale completely unusable. They suggested a country-based improvement on the scale to make it more reliable.<sup>26</sup> In contrast, Schmitt DP and Allik J did not find any difference in global self-esteem between individualist and collectivist cultures and recommended the use of RSES for measuring global self-esteem across dozens of languages and

cultures, including Asian.<sup>23</sup> Such validations and modifications, if necessary, are still to be done in the context of Nepal. Further studies in this regard are warranted.

Various confounding factors affecting self-esteem and academic performance such as mental health state, communication skills, study techniques, and absenteeism were not included in the study. The academic performance of only the recent board examination was included which could have varied due to several factors such as health, personal, or family problems. We used Google questionnaires to collect our data due to the COVID-19 pandemic

which prevented us from explaining the intentions of the questions in case of any confusion.

## CONCLUSIONS

We found no association between self-esteem and academic performance of university students. Females had higher RSE scores and academic performance than males.

**Conflict of Interest:** None

NJHS

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