

## Research Article

### A Cross-Sectional Study of Happiness, Self-esteem and Optimism in Medical Students

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#### Abstract

**Objective:** Medical students are exposed to a multitude of stressors which contribute to diminution of happiness. Self-esteem and optimism go hand in hand with happiness. Lack of the former two may further curtail the latter. The present study looked to determine interdependence between happiness, self-esteem and optimism among medical undergraduates, and discern any gender based differences between them.

**Methods:** In this cross-sectional research, medical students (n=173) were subjected to three validated psychological instruments namely Subjective Happiness Scale (SHS), Rosenberg Self-esteem Scale (RSES) and Life Orientation Test (LOT). Students were grouped as happy/unhappy, having higher self-esteem/lower self-esteem, and as optimistic/pessimistic on basis of their mean scores. SHS, RSES and LOT scores were also collated with gender. Comparative and co relational assessments were carried out using independent sample T-test and Pearson's correlation, respectively.

**Results:** Low frequencies of happiness (46.24%), self-esteem (52.60%) and optimism (49.13%) were observed. Significant correlation was found between the three parameters (RSES vs. SHS; Pearson's R= 0.369, p= 0.001) (LOT vs. SHS; Pearson's R= 0.323, p= 0.001) (RSES vs. LOT; Pearson's R= 0.271, p= 0.001). Gender based analysis did not show any difference in self-esteem (mean score; males 27.70 vs. females 28.02, p= 0.726) and optimism (mean score; males 15.41 vs. females 14.98, p= 0.550). However, there was a significant difference in happiness (mean score; males 19.77 vs. females 17.81, p= 0.017).

**Conclusion:** A major part of the medical student population is unhappy, pessimistic and has low self-esteem. Psycho-social measures should be implemented to curb such damaging elements.

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#### Introduction

Medical students face stress in the form of excessive workload,<sup>1</sup> examination strain, peer pressure and weight of expectation. This constant inundation of stress negatively impacts overall well-being and prosperity.<sup>1-3</sup> Studies have shown that a high proportion of medical students are unhappy.<sup>4</sup> Defined as a state of well-being and merriment,

happiness makes a person feel content with their self, reject miserable feelings, live in the present time and be able to respond adequately when challenged. Self-esteem also affects the feelings of happiness and it has been proposed that good self-esteem extenuates the impacts of stress.<sup>5-8</sup> Self-esteem fosters confidence and allows individuals to face criticism without any smear to their personal image. People with high self-esteem face challenges with more confidence,

benevolence and optimism. Inadequate self-esteem negatively affects self-development and well-being. Students with low self-esteem downplay the importance of appearing competent to their peers<sup>9</sup> which can lead to a perennial state of unhappiness and depression.

Optimism is the feeling of hopefulness or confidence about forthcoming events. Higher levels of optimism are associated with diminished perceived personal stress among students.<sup>10,11</sup> Optimism significantly influences mental as well as physical well-being by adaptive comportment associated with greater plasticity, problem-solving ability and more methodical obviation of negative information.<sup>12</sup> Positive thoughts kindle happiness; however, negative events and thoughts provoke depression.<sup>13</sup>

The existing literature suggests an association between self-esteem, happiness and optimism in the general population. Medical students are constantly exposed to a stressful environment owing to the strenuous nature of medical curricula all over the world. The challenges and stress posed by medical studies makes the medical students a unique group in whom the study of parameters like happiness, self-esteem and optimism is highly warranted in order to gain insights into their psycho-social health. The present study was carried out to find out the association between happiness, self-esteem and optimism among local medical undergraduates, and investigate any gender based differences among three parameters.

## Methods

The employment of cross-sectional observational study design was carried out in first half of the year 2018. Ethical approval was obtained from the Central Pak Ethical & Review Board. A total of 200 medical students enrolled at Central Park Medical College (years 1, 2, 3 & 4) were approached of which 173 took part in the study (86.5%). Students were informed of the study's nature prior to data collection, and written informed consent was procured. To assess the study framework, three certified and endorsed scales known as Subjective Happiness Scale (SHS), Rosenberg Self-esteem Scale (RSES) and Life Orientation Test (LOT) were employed in the paper form. Relevant demographic data such as age and sex were

also recorded. Responses were collected anonymously.

The SHS is a self-renouncing evaluation of felicity & happiness that comprises of 4 statements and uses a 7-point Likert scale. Scores ranges from 4 to 28 with an elevated score indicating a higher degree of happiness. The RSES is an endorsed self-reported scale of self-esteem that consists of 10 items and utilizes a 4-point Likert scale with the ranges of 10 to 40. Higher scores indicate better self-esteem. The LOT is a self-reported method of measuring optimism that comprises of 10 items and uses a 5-point Likert scale. Scores range from 0 to 24. Lower scores indicate pessimism whereas higher scores are indicative of optimism.

## Statistical Analysis

All collected data were analyzed using the software Statistical Package for Social Sciences (SPSS). Qualitative variables were presented in frequencies as well as in percentages. Mean  $\pm$  SEM of perceptible variables (SHS, RSES & LOT scores) was analyzed for all students combined and for male and female students independently. Student grouping into happy/unhappy, high self-esteem/ low self-esteem and optimistic/pessimistic was concluded using the calculated means as cut-offs. Independent sample T-test was employed to scrutinize gender-based distinctness. Pearson's correlation was employed to find out correlation between SHS, RSES and LOT scores. A p-value of less than of 0.05 was known as statistically significant.

## Results

The mean age of all students (n=173) was 20.5 years with the range of 17-24 years. 129 out of total 173 students were female (74.5%); 44 of them were male (25.4%). Of the total 173 students, 52 were 1st year students (30.1%), 82 were 2nd year students (47.4%), 9 were 3rd year students (5.2%) and 30 were 4th year students (17.3%). The extent of SHS scores for all students combined was 5-28 with the Mean  $\pm$  St. Dev. of  $18.31 \pm 4.749$ . Mean SHS score for males was  $19.77 \pm 4.640$ . Mean SHS score for females was  $17.81 \pm 4.699$ . A significant difference in SHS scores was present between male and female students (p=0.017) described in Table 1.

The spectrum of RSES scores for the entire study population was 2-40 with a mean of  $27.94 \pm 5.067$ . RSES score for males was  $27.70 \pm 6.106$  (Mean + St. Dev). Mean RSES score for females was  $28.02 \pm 4.685$ . No gender-based difference was observed between RSES scores ( $p=0.726$ ) (Table 1). LOT scores for all students combined ranged between 2 and 30 with a mean + St. Dev of  $15.09 \pm 4.048$ . LOT score for males was 15.41 (Mean + St. Dev). LOT score for females was 14.98 (Mean + St. Dev). No difference in LOT scores between males and females was observed ( $p=0.550$ ) (Table 1).

Applying the mean values as cut-offs, 80 of the 173 students (46.24%) were classified as happy, 91 (52.60%) had good self-esteem and 85 (49.13%)

**Table 1:** Gender-Wise Comparison of SHS, RSES and LOT Scores.

Parameter	All students (n=173) Mean $\pm$ St. Dev.	Males (n=44) Mean $\pm$ St. Dev.	Females (n=129) Mean $\pm$ St. Dev.	p-value
SHS score	$18.31 \pm 4.749$	$19.77 \pm 4.640$	$17.81 \pm 4.699$	0.017*
RSES score	$27.94 \pm 5.067$	$27.70 \pm 6.106$	$28.02 \pm 4.685$	0.726
LOT score	$15.09 \pm 4.048$	$15.41 \pm 4.042$	$14.98 \pm 4.060$	0.550

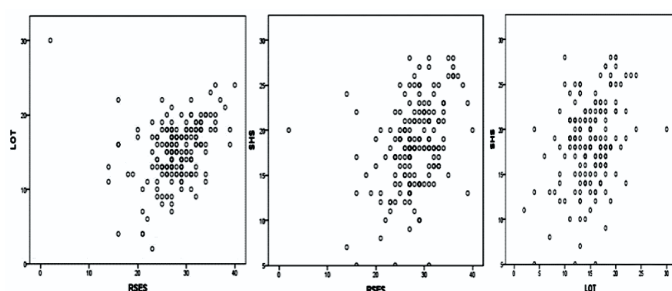
\*Difference is considered significant at  $p<0.05$

**Table 2:** Correlation between SHS, RSES and LOT

	Pearson's R	p-value
SHS vs. RSES	0.369	0.001*
SHS vs. LOT	0.323	0.001*
RSES vs. LOT	0.271	0.001*

\*Difference is considered significant at  $p<0.05$

were categorized as optimistic. Significant positive correlation was determined between SHS & RSES scores ( $p=0.001$  elaborated in Table 2 & Figure 1), SHS & LOT scores ( $p=0.001$  described in Table 2) (Figure 1) as well as RSES and LOT scores ( $p=0.001$  given in Table 2 & illustrated in Figure 1).



**Figure 1.** Scatter Plots of LOT, SHS and RSES scores.

## Discussion

Happiness is a fundamental human emotion and entails positivity, contentment, equanimity and absence of negativity.<sup>14</sup> The present study reported a high frequency of unhappiness (53.76%) in medical students. A plausible argument for these findings is the prevalence of stress and other vexing agents amidst the medical fraternity.<sup>15</sup> It has been shown that medical professionals and undergraduates are constantly exposed to a plenitude of pressure and strain<sup>8,16-19</sup> Gender-based analysis revealed that male students were happier than female students (Table 1). Some previous studies have suggested that women are happier than men.<sup>6,20</sup> Our findings can be explained on the basis of various biological, hormonal and social contributors. Women are more receptive to stress than men and have a greater tendency to rehash negative thoughts. Women are subjected to greater scrutiny and social pressure. Thus, they are more likely to pursue perfection based goals compared to men.<sup>21</sup>

Self-esteem has a major influence on happiness. In the current study, nearly half of the study population expressed diminished levels of self-esteem. Gender-based analysis revealed no disparity, and was in accordance with a previous study.<sup>22</sup> Correlational analysis revealed significant consistency between happiness and self-esteem (Table 2). Students with higher self-esteem were happier compared to those with lesser self-esteem. This further corroborates the assertion that self-esteem greatly impacts joviality/happiness.

Optimism generally refers to the expectation of positive outcomes. In this study, most medical students exhibited pessimistic traits with there being a low occurrence of optimism.<sup>22</sup> Gender-based analysis uncovered no dissimilitude (Table 1). Optimism scores were also consistent with students' happiness and self-esteem scores (Table 2). Studies suggest that optimism and pessimism are somewhat heritable<sup>23</sup> and are also influenced by environmental factors. Medical students are exposed to an abundance of stressful situations which in turn intensifies their risk of falling prey to negativity. Lack of an optimistic attitude is detrimental to overall health.<sup>24</sup> The present findings warrant further investigation into this area adequately designed studies. The cross-sectional composition of the current study did not



concede for interpretation of a causal relationship between the studied parameters. The researchers did not have control over the carefulness with which the students filled in their responses which is another aspect which demands consideration while designing future studies.

### Conclusion

Unhappiness, low self-esteem and pessimism are highly prevalent among medical students. These may further decrease learning capacity and cause a decline in achievement, making medical undergraduates more susceptible to failure. There is a strong need to eliminate such deleterious elements through counseling and encouragement which can help students overcome these problems.

### Conflict of Interest

The authors declare no conflict of interest.

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