

# PREVALENCE OF DEPRESSION AMONG FEMALE MEDICAL UNDERGRADUATE STUDENTS LIVING IN DORMITORIES, IN KARACHI - A CROSS-SECTIONAL STUDY

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## ABSTRACT

*Literature indicated that medical undergraduates are more vulnerable to depression than their counterparts and it has adverse effects on their general health. The study was aimed to find out prevalence of depression among the female medical undergraduates residing in dormitories. Cross sectional study was conducted from August 2017 to September 2017. Data were collected from 100 female undergraduates living in dormitories. CES-D20 inventory was used for measuring self-reported depression. Depression was measured with age categories and muscle weakness. The prevalence of depression was 68 %. There was significant difference of depression prevalence among age categories and students having symptoms muscle weakness. The depression of score was statistically significant with age and positive linear relationship was observed. Elder students were more prone to depression. Muscle weakness was also observed with depressive symptoms.*

**Key Words:** *Depression, dormitories, Female students.*

## INTRODUCTION

World Health Organization has estimated that almost 350 million people of all ages have depression and over 8, 00,000 people succumb to death yearly from suicide with depressive symptoms.<sup>1</sup> According to WHO depression will reach the second prominent exposure to disability for all ages and sexes by 2020.<sup>2</sup>

Students acquiring a medical education were more vulnerable than other fields of studies, range from 10.2% to 71.2% and have higher levels of distress and mental disorders<sup>3,4</sup> as compared to the general

population<sup>2</sup> which is ranging from 2.3% and 10.9%.<sup>5</sup> Depression affects the cognition of students by interfering student's mood, motivation and concentration.<sup>6</sup> Its intensity increases throughout their academic career and deteriorates their mental capacities<sup>7</sup>, its symptoms remain present in their medical practice.<sup>4</sup> Subsequently physicians inadvertently misdiagnosed the patient disease therefore, delayed the patients diagnosis and treatment.<sup>8</sup> Risk factors related to depression documented in literature were social issues, suffering from chronic diseases, financial issues, low socio-economic status and being a female<sup>9</sup> and it was more prevalent in female medical students.<sup>10</sup> Cross-sectional surveys conducted in students studying medicine in Malaysia, Thailand and Riyadh where the prevalence was 41.9%, 61.4% and 57% respectively.<sup>11,12</sup>

A Study reported from students of medicine from Sweden where the rate of depression was 12.9% and from them, 2.7% attempted suicide.<sup>13</sup> A study was done in medicine undergraduates in Iran where frequency of depression was higher than female counterpart.<sup>14</sup> The scarcity of knowledge and research for presence of depression in the feminine students of dormitories and females residing away from their family. However, there were studies conducted in female student's

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studying medicine but very less information present in literature for them living in a dormitory. Loneliness, living away from family for an extended period affects the student's capabilities, this research identifies the illness in female medical students. In this study, the depression among undergraduate female students living in the dormitory was measured in private Medical University, Karachi.

## METHODOLOGY

A survey was done from August 2017 to September 2017 in girl's dormitory situated in private university in Karachi, Pakistan. Students of medical and dental college were included. A data from female students of all ages, who were present at the time of data collection and who gave informed written consent to participate were only included. Girls absent while collecting data were excluded. Information from students was collected on two questionnaires. A Standard questionnaire for measuring depression included was the depression inventory form from Center for Epidemiology Studies (CES-D).<sup>15</sup> Radloff developed the CES-D Performa for measuring the severity of symptoms of depression in population for epidemiological studies. It's a 20 item self-report scale which consists of components including depressive mood, feelings of worthlessness and hopelessness, loss of appetite, poor concentration and sleep disturbances, anhedonia, retardation. Each response rated on four-point scale from 0 to 3.<sup>16</sup> The score range from 0 to 60, a higher score indicating more symptoms of depression. A cut-off value of 21 and above is used to report depressive symptoms.

A second self-structured questionnaire, consists of information on age, type of education of the students, difficulty in thinking and history of muscular weakness was used. The Female dentist who was also the resident of the dormitory, distributed and collected Questionnaire from the female residents of the dormitory. Verbal consent was taken prior to the data collection.

Descriptive statistics was used variable. The relation between CES-D score and age was determined by a Pearson coefficient correlation. Chi-square test was used to observe the differences in frequency of presence and absence of depression with the categorical variables. A p-value of less than 0.05 was considered statistically significant. The data were analyzed by the statistical software (SPSS 20).

## RESULTS

Hundred female students participated, their age ranged between 18 to 28 years, with mean age and SD was 22.3 and 2.2 respectively. There were 66 local and 34 foreigner students. 88 females' students were unmarried and 11 students were married. There were 52 dental students and 48 medical students. There

were 97 females students who had difficulty in thinking clearly and only 3 students had no difficulty in clearly in thinking.

There were 68 % students reported suffering from moderate to severe depression or having symptoms of depression. The prevalence was higher in group 23-28 years and was statistically significant from lower age group present in table 1. Results also showed that depression was also different among the students who had weakness in muscle and depression score was higher in a group with muscular weakness and was different from other groups presented in Table 1. A moderate positive linear relationship was observed between the depression score and the age of the female students. Depression among the students with and without muscle weakness was statistically different and depression score was higher in group with muscular weakness (Table 1). The r value was 0.320 at p-value 0.001 (Figure 1). Prevalence of CES-D score rated by students, 12 % of the research participants have depression score 24 (Figure 2).

## DISCUSSION

Research was designed to find out the prevalence of depression in the female students living in dormitory. The results showed that prevalence of depression was higher among the students. The results showed that 68% female students living in dormitory's had symptoms of depression which is dissimilar to the study of female medical students in Saudi Arabia where the prevalence of depression was 14.7%<sup>17</sup>. Another study conducted in China where the frequency of depression was concurrent to our study where 62.8% female students have depression symptoms.<sup>18</sup> In contrast to this research another study from Hong Kong, China among the nursing students where the depression of prevalence among students was 24.3% and it was higher in female students. In this research depression was higher in older group (23-28) and the results were contrast to study done in Hong Kong, China where the depression was higher in lower group compare to higher group.<sup>19</sup> It could be postulated that depression in medical education elevated in their last years of education because medical education get tougher as it progresses and load of study are also higher. Similarly in another, cross sectional survey conducted among the medical students in Karachi, it was found that dormitory students of both gender had depression which was 40.4%.<sup>20</sup>

In sub-continent region young women live dependently with their family. Living outside from the family independently could be reason of psychological depression and thus creates symptoms of depression.<sup>21</sup> Survey conducted among the Indian youngster where the loneliness was found to be with the independent

TABLE 1: ASSOCIATION OF DEPRESSION WITH AGE GROUP AND MUSCLE WEAKNESS.

Variables	Students without depressive symptoms	Students with clinical depressive symptoms	Total	P-value
Age Group				
18-23	24	35	59	0.021
24-28	8	33	41	
Muscle weakness				0.018
Yes	5	26	31	
No	27	42	69	

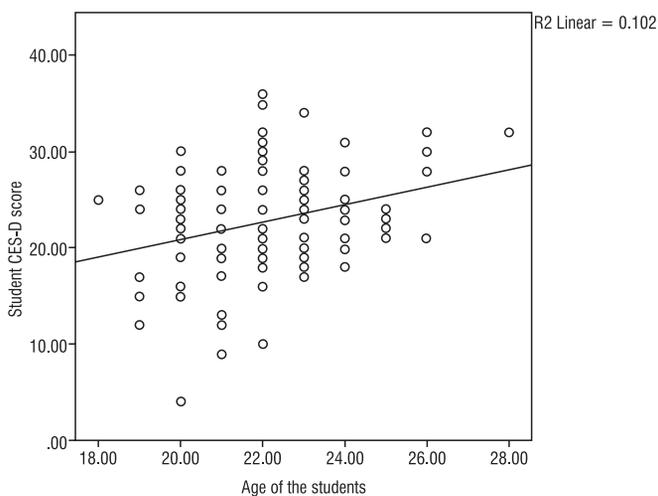


Figure 1: Scatter plot shows the positive correlation between depression score and age of the female students.

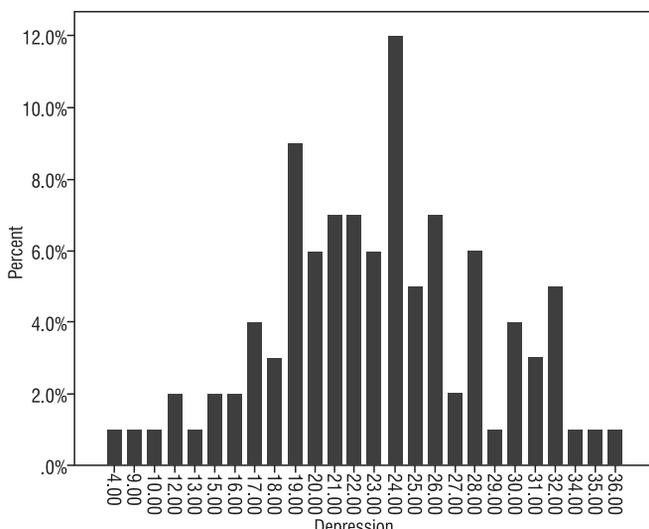


Figure 2: Prevalence of CES-D Score of depression among the study participants

risk factor associated with depression in youngsters.<sup>22</sup> In dormitory life students living independently starts to learn to cope with the new surrounding and manage to live with the other students. Students living independently have issues of economic, adjustment problems with other students, distress and disturbance in eating and appetite behavior.<sup>23,24</sup>

In our research 31% students reported muscular weakness out of them 83% students have depressive symptoms. There were 26% medical students who have both depressive and pain symptoms. Large survey done in European countries where the self-reported depression along with pain was also observed which was concurrent to our research and the prevalence was 21%.<sup>25</sup> Reduction in muscle strength could be related to psychiatric disorders. Psychological problems are the common cause of chronic weakness.

Inadequate rest, sleep, diet intake are also the causes of weakness.<sup>26</sup> Medical students have common complaint of weakness which lead to the poor educational score.<sup>27</sup> The study have drawbacks due to its cross sectional design in nature. There is a scarcity of data among the female dormitory students and prevalence of depression among them. The data was collected only from one dormitory in Karachi and therefore the results could not reflect to the whole medical female students living in other students living in dormitories. The limitation of the study was that many confounding factors were not analyzed in the research.

**CONCLUSIONS**

This research explore the depression symptoms among female undergraduate students who were the residence of dormitory. Our research thus concluded that symptoms of depression was higher among female dormitory students. Elder students had higher prevalence of depressive symptoms and age was positively associated with depression.

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| <b>1 Muhammad Ali Leghari:</b> | Principal author.             |
| <b>2 Kashif Ikram:</b>         | Study conception and design.  |
| <b>3 Syed Inayat Ali:</b>      | Drafting of manuscript.       |
| <b>4 Aisha Rizwan:</b>         | Collection and entry of data. |
| <b>5 Zahabia Mahmood:</b>      | Collection and entry of data. |
| <b>6 Nazifa Rezaee:</b>        | Collection and entry of data. |