

# EFFECT OF SOCIAL SUPPORT ON BURNOUT IN MEDICAL STUDENTS

Muhammad Ali<sup>1</sup>, Aisha Liaquat<sup>2</sup>, Mifrah Rauf Sethi<sup>3</sup>, Muhammad Irfan<sup>4</sup>

<sup>1,2</sup> Undergraduate student, Peshawar Medical College, Riphah International University, Islamabad – Pakistan.

<sup>3,4</sup> Department of Mental Health, Psychiatry & Behavioural Sciences, Peshawar Medical College, Riphah International University, Islamabad – Pakistan

**Address for Correspondence:**  
**Dr. Muhammad Irfan**

Head, Department of Mental Health, Psychiatry & Behavioral Sciences, Peshawar Medical College, Riphah International University, Islamabad – Pakistan.

Email: mirfan78@yahoo.com

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## ABSTRACT

**Objective:** To estimate the frequency of burnout in medical students of Peshawar and correlate the impact of social support on it.

**Methodology:** The study was conducted by using cross-sectional research design that included students of medical colleges of Peshawar, from January to March 2017. Oldenburg Burnout Inventory (OLBI) and Social Support Rating Scale (SSRS) were used to measure burnout and social support along with recording demographic information. Analysis was done using SPSS v.20. To find out gender and year-wise differences, independent sample t-test was used. For finding relationship between burnout and social support, Pearson correlation was used.

**Results:** The mean age of the sample (n=373) was  $20.7 \pm 1.3$  years. There were 253 (67.8%) female students and clinical year students were 188 (50.4%). According to the responses of OLBI, 228 (61.1%) students were having burnout while 153 (41%) students did not have appropriate social support, based on SSRC. There was no significant gender differences in the overall mean scores of OLBI and SSRS; while pre-clinical year students received more social support than clinical year students ( $p=.013$ ). The Pearson correlation showed negative but non-significant correlation between burnout and social support ( $r= -.065$ ,  $p= .212$ ).

**Conclusion:** Burnout was reported in two third of the students while majority of students showed high level of social support. However, no significant correlation was observed in both the scales.

**Key Words:** Burnout, Social support, Medical students, Medical education

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## INTRODUCTION

Students are considered to be future builders of any country and their further development is of utmost importance to the growth of a country. However, their development becomes at risk due to mental exhaustion, prolonged stress, and education related issues, leading to burnout<sup>1</sup>. "Burnout is a state of emotional, physical, and mental exhaustion caused by excessive and prolonged stress. It occurs when you feel overwhelmed, emotionally drained and unable to meet constant demands. As the stress continues, you begin to lose the interest and motivation that led you to take on a certain role in the first place"<sup>2</sup>. Burnout assessment has fascinated the curiosity of researchers around the globe. The deficiency of explanation and clarification about the problem of burnout has striving towards burnout research throughout the world. Social researchers, psychologists, particularly faced problems in deciding the dimensions of burnout<sup>3</sup>.

"Social support is the physical and emotional comfort given to us by our family, friends, co-workers and others. It is knowing the fact that we are part of a community of people who love and care for us and value and think well of us"<sup>4</sup>. Social support can function as a facilitator of desire efflorescence and internal potentials. Social support, in fact, is the reflection of the perceptions and impressions of an individual, and the interpersonal exchanges in a social network<sup>1</sup>.

In any institution of higher education, students are subject to burnout due to societal pressure, financial issues, study hours, college assessments and relationships with teachers and friends, making them at risk population<sup>5,6</sup>. A medical school period is that time of life in which many behavioral patterns will appear and alleviate and these patterns may affect a person's performance and efficiency. Therefore, medical students are more prone to burnout than other students are and therefore are in need of social support<sup>1</sup>. Up to half of the

medical students experience burnout, a quarter have depression and a sizable number have chronic anxiety and a poor mental quality of life<sup>7,8</sup>. In this context, burnout among medical students can also be considered as a predictor of psychological impairments like depression and low self-esteem<sup>9,10</sup>. However, as compared to other students, those perceiving higher levels of social support are more likely to be resilient to and to recover from burnouts<sup>11</sup>.

Due to the competitive nature of medical education system in Pakistan, Pakistani medical students are likely to experience high levels of burnout. Although, studies have been conducted on burnout, no study has examined the impact of social support on burnout in medical students, to our knowledge. Therefore, this study was planned to estimate the frequency of burnout and the impact of social support on the occurrence of burnout.

## METHODOLOGY

A cross-sectional survey with purposive sampling technique was conducted at two medical colleges of Peshawar-Pakistan, namely Peshawar Medical College and Khyber Girls Medical College, from January to March 2017. The sample consisted of all the students from all years of medical college and consenting to participate. Students already diagnosed with mental health problems were excluded from the study. The partici-

pation was voluntary and all the information was kept confidential. The Ethical Review Committee of Peshawar Medical College, Peshawar, approved the study.

Oldenburg Burnout Inventory (OLBI) is used for measuring burnout. It consists of 16 items, measuring two dimensions of burnout, Disengagement (items 1, 3, 6, 7, 9, 11, 13, 15) and Exhaustion (items 2, 4, 5, 8, 10, 12, 14, 16)<sup>12</sup>. The uniqueness of this inventory is that it has both negative and positive items in both of its sub-dimensions that is why, it gives a better model fit of two factors<sup>13</sup>. Higher score indicates more burnout. Social Support Rating Scale (SSRS) was used to assess the impact of social support on burnout in medical students. It comprises of three subscales: Subjective Support (Question 1, 3, 4, 5), Objective Support (Question 2, 6, 7) and Utilization of Social Support (Question 8, 9, 10). The total SSRS score is the sum of the scores from the three subscales. A higher score indicates more social support<sup>14</sup>.

The results were analyzed using SPSS v.20. Analysis of the basic variables was carried out using descriptive statistics for finding frequencies and percentages of OLBI and SSRS. The independent sample t-test was used to find out the gender differences and year-wise differences. Pearson correlation was used to find out the relationship between burnout (OLBI) and social support (SSRS). The results were considered significant at  $p < 0.05$  level

**Table 1: Demographic and basic details of the study (n=373)**

Sr. No	Variables	Frequency (%)*	
1.	Gender	Male	120 (32.2%)
		Female	253 (67.8%)
2.	Year of Schooling	Pre-Clinical	185 (49.6%)
		Clinical	188 (50.4%)
3.	Overall OLBI (Burnout) Mean= 36.3 ± 4.99	Low= 145 (38.9%) High= 228 (61.1%)	
4.	Disengagement subtype of OLBI Mean= 20.7 ± 2.72	Low= 163 (43.7%) High=210 (56.3%)	
5.	Exhaustion subtype of OLBI Mean= 20.1 ± 3.50	Low= 154 (41.3%) High=219 (58.7%)	
6.	Overall SSRS (Social Support) Mean= 29.3 ± 4.70	Low= 153 (41.0%) High=220 (59.0%)	
7.	Subjective Support subtype of SSRS Mean= 17.5 ± 3.53	Low= 146 (39.1%) High=227 (60.9%)	
8.	Objective Support subtype of SSRS Mean= 5.54 ± 1.37	Low= 201 (53.9%) High=172 (46.1%)	
9.	Utilization of Social Support subtype of SSRS Mean= 6.35 ± 1.69	Low= 116 (31.1%) High= 257 (68.9%)	

\* Mean, SD, Low and High scorers with percentage on both scales and their subtypes

## RESULTS

A total of 399 students were asked to participate in the study; among them 373 completed the questionnaire and were included in the study. The response rate was 93.5%. The mean age of the sample (n=373) was 20.7 ±1.3 years. There were 253 (67.8%) female students and slightly more clinical year students (n=188, 50.4%) than non-clinical year students. According to the responses of OLBI, 228 (61.1%) students were having burnout while 153 (41%) students do not have appropriate social support, based on SSRC. Further details are given in Table 1.

No significant gender differences were found between the mean scores of overall burnout and social support, but male students had significantly more burnout on disengagement subtype of OLBI ( $p = .038$ ), while female students showed more burnout on Exhaustion subtype of OLBI ( $p = .000$ ). On SSRS, male students showed significantly more subjective social support as compared to female students ( $p = .037$ ). Further details are given in Table 2.

Between pre-clinical and clinical years of education, overall OLBI showed no significant difference but students of pre-clinical years had significantly more burn-

out on Disengagement subtype ( $p = .000$ ) and clinical year students showed more on Exhaustion subtype of OLBI ( $p = .01$ ). On SSRS, students of pre-clinical year showed more overall support ( $p = .013$ ) and subjective support ( $p = .021$ ) as compared to clinical year students. Further details are given in Table 2. The details of Pearson correlation are given in Table 3.

## DISCUSSION

We used OLBI to assess the frequency of burnout among students of medical colleges and the effect of social support on it, measured by SSRS. The findings of our research showed that almost two third students had burnout, which is higher than reported in half of the participants in a study on medical students of United States<sup>15</sup>, one third of the professionals working in Portuguese hospital<sup>16</sup> and one fifth of Sri Lankan doctors<sup>17</sup>. Our research findings showed similar results to the findings of Talaei et al<sup>18</sup> on social support.

In a literature review, Mathew, after reviewing many studies, reported a significant relationship between burnout and gender<sup>19</sup>. In majority of the studies, female students had higher levels of burnout than male students<sup>20-22</sup>, and more specifically, being female highly

**Table 2: Gender and year-wise mean differences of OLBI, SSRS and their subtypes (n=373)**

Variables	Gender		t value (p value)	Year of Education		t value (p value)
	Male M(SD)	Female M(SD)		Pre-Clinical M(SD)	Clinical M(SD)	
Overall OLBI (Burnout)	35.83 (5.88)	36.57 (4.50)	-1.338 (.182)	36.09 (5.63)	36.56 (4.28)	-.902 (.368)
Disengagement subtype of OLBI	21.18 (2.26)	20.55 (2.90)	2.081 (.038)	21.25 (2.59)	20.26 (2.76)	3.556* (.000)
Exhaustion subtype of OLBI	19.02 (3.16)	20.71 (3.53)	-4.471* (.000)	19.57 (3.15)	20.76 (3.73)	-3.315* (.001)
Overall SSRS (Social Support)	30.00 (5.20)	29.11 (4.42)	1.719 (.086)	30.01 (5.06)	28.79 (4.24)	2.509* (.013)
Subjective Support subtype of SSRS	18.06 (3.91)	17.24 (3.32)	2.095* (.037)	17.93 (3.77)	17.09 (3.24)	2.320* (.021)
Objective Support subtype of SSRS	5.69 (1.50)	5.47 (1.30)	1.457 (.146)	5.65 (1.42)	5.44 (1.32)	1.498 (.135)
Utilized Social Support subtype of SSRS	6.25 (1.80)	6.40 (1.64)	-.773 (.440)	6.43 (1.75)	6.27 (1.64)	.888 (.375)

\* Sig:  $p < .05$  level

**Table 3: Pearson correlation between burnout and social support (n=373)**

Variables	Burnout (OLBI) (p value)	Social Support (SSRS) (p value)
Burn out (OLBI)	1	
Social support (SSRS)	-.065 (.212)	1

correlated to the exhaustion component of burnout<sup>21</sup>. This is in line with the findings of our study where more female medical students reported burnout and significantly more female students reported exhaustion subtype of OLB. A recent systematic review of 33 studies, however, reported a greater level of burnout in Chinese male medical students<sup>23</sup>. Our study found no significant difference between male and female medical students regarding social support, which is in line with another study conducted in Pakistan<sup>24</sup>. A number of studies have reported females to receive more social support than males<sup>25,26</sup>; however, one study reports otherwise i.e., male medical students to have more social support<sup>1</sup>.

The findings of our study showed no significant difference in overall burnout between pre-clinical and clinical year students while disengagement subtype was significantly more in pre-clinical year students and exhaustion subtype was more in clinical year students. Similar to our findings, Muzafar et al reported no significant difference in burnout as regards to the years of study in a medical school<sup>27</sup>. However, most of the studies have reported more burnout with increased time in medical college<sup>28,29</sup> except a study by Dyrbye et al<sup>30</sup> who reported pre-clinical year students to be 1.78 times more likely to report burnout than clinical year students. Our study findings are similar to the study by Hendrix et al<sup>31</sup> that reported no significant relationship between burnout and social support, while our findings are in contrast with other studies, who reported that there was less burnout with increased social support<sup>32-34</sup>. In a similar study of Nie et al<sup>35</sup> burnout scores were negatively associated with the score of social support and they suggested that increasing better social support is a good way to reduce burnout. Looking at the issue, in a different perspective, a study has shown significant correlation of perceived social support with work motivation, which can be considered as the opposite of burnout, giving the same impression of inverse correlation of social support and burnout<sup>36</sup>.

## CONCLUSION

Almost two third medical students from the sample were having issues of burnout. Although less than half of the students showed low level of social support but there was no significant correlation with burnout. Since it is the first of its kind study in Peshawar, there is a room for improvement in terms of increasing the number of institutions/subjects and adding more variables related to assessing burnout and social support in the context of academic performance.

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### CONTRIBUTORS

MA and MI conceived the idea. MA & AL did data collection and helped in the write up of the study. MRS did statistical analysis and helped in the write up of the study. MI planned the study, critically revised the manuscript and supervised the study. All authors contributed significantly to the submitted manuscript.