

# EFFECT OF SOCIAL SUPPORT ON MINDFULNESS OF MEDICAL AND DENTAL STUDENTS

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Date Received:

March 27, 2019

Date Revised:

August 19, 2019

Date Accepted:

August 30, 2019

## ABSTRACT

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

**Methodology:** This cross-sectional study conducted from December 2017 to March 2018, included students of medical and dental colleges of Peshawar. Participants were selected by convenience sampling, and were asked to complete the Mindful Attention Awareness Scale (MAAS) and Social Support Rating Scale (SSRS). MAAS consists of 15 items and SSRS comprises of 10 questions with three subscales; subjective support, objective support and utilization of social support. The data was analyzed using SPSS version 20.

**Results:** The mean age of the sample (n=624) was 20.9 ±1.6 years. Majority were male students 369 (59.1%) and most of the sample was collected from Private sector institutions (n=497, 79.6%), medical students (n=475, 76.1%) and from First year (n=236, 37.8%). The Cronbach's alpha reliability of MAAS in our study was 0.886. According to the responses on MAAS, there were 268 (42.9%) students having mindfulness. The responses on SSRS showed that 297 (47.6%) students do not have appropriate social support. The Pearson correlation showed that students who had better social support, showed more mindfulness (p=0.000).

**Conclusion:** Every eighth medical student lacks appropriate social support and every sixth student having issues of mindfulness. However, a significant correlation was observed in both scales. MAAS can be reliably used in our setup.

**Key Words:** Mindfulness attention awareness scale (MAAS), Social support, Medical students

This article may be cited as: Ali M, Sethi MR, Irfan M. Effect of social support on mindfulness of medical and dental students. *J Postgrad Med Inst* 2019; 33(3): 222-6.

## INTRODUCTION

Mindfulness refers to a "state of mind that is relaxed, present, focused and filled with awareness of one's own sensations, emotions and thoughts without judgment"<sup>1</sup>. Mindfulness involves acceptance, where we focus on our thoughts and feelings without having the sense of being judgmental<sup>2</sup>. There is a growing consensus among mental health professionals and international health organizations that more work and research needs to focus on prevention of mental illness<sup>3</sup>. Therefore, there has been steady increase in the research on mindfulness in recent years<sup>4</sup>. The research interest has been specifically focused on the use of mindfulness as a psychological function and its use in various clinical frameworks for treatment of a variety of illnesses especially anxiety and depression<sup>5-13</sup>.

Mindfulness plays a vital role in a person's social relationships, as it increases people's ability to iden-

tify and communicate emotional states and regulate anger expression<sup>14</sup>. It also increases people's ability to cope with relationship stress<sup>15</sup>. The reason behind these positive effects can partly be attributed to the fact that mindfulness genuinely increases concern towards relationships<sup>16</sup>. Since the stressors of medical education and training are significant and the emphasis has to be on earning the art of dealing with a high degree of stress, concentrating on individual wellness and developing the capacity to deliver professional and empathetic patient care<sup>17-19</sup>. In this context, studies have suggested that students having mindfulness and social support, deal positively with stresses in their daily lives<sup>5,7,20</sup>.

As the medical education system in Pakistan is competitive and performance-driven, it is presumed that Pakistani medical students may experience high levels of stress and consequently mindfulness and social support may be helpful in coping with such stress. The present study aims to estimate the frequency of mindfulness in

medical and dental students of Peshawar and correlate the impact of social support on it. These findings may not be generalized but may be of vital importance in the context of medical education in Pakistan.

## METHODOLOGY

This cross sectional study was conducted in all public and private sector medical and dental institutions of Peshawar, Pakistan. The duration of the study was from December 2017 to March 2018. Convenience sampling technique was used and all the students consenting to participate were included. The participation was entirely voluntary and information was kept confidential. The study was approved by Ethical Review Committee (ERC) of the institution. Students who have been diagnosed with some kind of mental distress or sleep disturbances were excluded. All the students from 1<sup>st</sup> year to final year were invited to complete the survey. Students, after taking consent, were provided with a set of questionnaires of Mindful Attention Awareness Scale (MAAS) and Social Support Rating Scale (SSRS), along with demographic information.

Mindful Attention Awareness Scale was developed by Brown and Ryan in 2003<sup>1</sup>. MAAS consists of 15 items and is designed to assess mindfulness. Higher scores reflect higher levels of mindfulness. The measure takes 10 minutes or less to complete. Social Support Rating Scale is used to measure social support and was devel-

oped by Xiao<sup>21</sup>. SSRS comprises of 10 questions with three subscales; subjective support, objective support and utilization of social support subscales. The total SSRS score is the sum of the score from the three subscales. A higher score indicates more social support.

The data was analyzed by using SPSS v.20. Analysis of the basic variables was carried out using descriptive statistics. Reliability of the scales was carried out through Cronbach's alpha reliability. Chi-square test was applied to find out the gender difference and difference between private and public sector medical and dental college populations. Correlation was calculated between MAAS and SSRS by applying Pearson correlation. The results of all the tests of significance were considered significant at  $p < 0.05$  level.

## RESULTS

The mean age of the sample ( $n=624$ ) was  $20.9 \pm 1.6$  years. Majority were male students 369 (59.1%) and most of the sample was collected from Private sector institutions ( $n=497$ , 79.6%), from medical students ( $n=475$ , 76.1%) and from First year ( $n=236$ , 37.8%). The Cronbach's alpha reliability of MAAS in our study was 0.886. According to the responses of MAAS, there were 268 (42.9%) students having mindfulness. The responses on SSRC showed that 297 (47.6%) students do not have appropriate social support. Details are given in Table 1.

**Table 1: Basic details of the study (n=624)**

Characteristics		Frequency	Percentage
1	Gender	Male	369 (59.1%)
		Female	255 (40.9%)
2	Institutes	Private	497 (79.6%)
		Public	127 (20.4%)
3	Specialty	Medical	475 (76.1%)
		Dental	149 (23.9%)
4	Class	1 <sup>st</sup> year	236 (37.8%)
		2 <sup>nd</sup> year	103 (16.5%)
		3 <sup>rd</sup> year	139 (22.3%)
		4 <sup>th</sup> year	114 (18.3%)
		5 <sup>th</sup> year	32 (5.1%)
5	Mindful Attention Awareness Scale (MAAS)	High	268 (42.9%)
		Low	356 (57.1%)
6	Social Support Rating Scale (SSRS)	High	327 (52.4%)
		Low	297 (47.6%)

**Table 2: Summary of Pearson correlation between MAAS and SSRS among medical and dental students (n=624)**

S. No	Variables	I	II
I	Mindfulness Attention Awareness Scale	1	-
II	Social Support Rating Scale	.169** (.000)	1

**Table 3: Chi-Square distribution of MAAS and SSRS among gender, private and public sector in medical and dental students of Peshawar (n=624)**

Variable	M (SD)	(n=624)	Private Sector	Public Sector	P value	Medical	Dental	P value	Male	Female	P Value
Mindfulness Attention Awareness Scale (MAAS)	45.05 (12.8)	High	199 (31.9%)	69 (11.1%)	.004	169 (27.1%)	99 (15.9%)	.000	133 (21.3%)	135 (21.6%)	.000
		Low	298 (47.8%)	58 (9.3%)		306 (49%)	50 (8%)		236 (37.8%)	120 (19.2%)	
SSRS Overall	31.82 (4.52)	High	251 (40.2%)	76 (12.2%)	.060	244 (39%)	83 (13.3%)	.355	191 (30.6%)	136 (21.8%)	.699
		Low	246 (39.4%)	51 (8.2%)		231 (37%)	66 (10.6%)		178 (28.5%)	119 (19.1%)	
Subjective Support	19.31 (3.35)	High	297 (47.6%)	81 (13%)	.408	286 (45.8%)	92 (14.7%)	.738	227 (36.4%)	151 (24.2%)	563
		Low	200 (32%)	46 (7.4%)		189 (30.3%)	57 (9.1%)		142 (22.8%)	104 (16.7%)	
Objective Support	6.17 (1.35)	High	338 (54.2%)	86 (13.8%)	.950	314 (50.3%)	110 (17.6%)	.078	225 (36.1%)	199 (31.9%)	.000
		Low	159 (25.5%)	41 (6.6%)		161 (25.8%)	39 (6.2%)		144 (23.1%)	56 (9%)	
Utilization of Social Support	6.34 (1.66)	High	352 (56.4%)	92 (14.7%)	.720	345 (55.3%)	99 (15.9%)	.146	270 (43.3%)	174 (27.9%)	181
		Low	145 (23.2%)	35 (5.6%)		130 (20.8%)	50 (8.0%)		99 (15.9%)	81 (13%)	

The Pearson correlation showed that students who had better social support, showed more mindfulness ( $p = 0.000$ ); complete details are given in Table 2.

Significant gender differences were found between the scores of MAAS; male students were more mindful as compared to females ( $p = .000$ ). Whereas no significant gender difference was found on Social support ( $p = .699$ ). Private sector students were more mindful as compared to public sector students ( $p = .004$ ); but no significant difference was found on social support ( $p = .060$ ). On SSRS, male students showed significantly more subjective social support as compared to female students ( $p = .000$ ). Further details are given in Table 3.

## DISCUSSION

We used MAAS to evaluate the frequency of mindfulness in medical and dental students. We also assessed the effect of social support on mindfulness. The Cronbach's alpha reliability of MAAS scale came out to be .866 which is similar to other studies, which has shown similar findings<sup>17,22-27</sup>. One of the study showed low reliability as compared to our study findings (0.75)<sup>28</sup>.

Our results showed that 268 (42.9%) students had mindfulness which is similar to the findings of a research by Ahmadi et al<sup>28</sup> in which 37% undergraduate students had mindfulness. The findings of our research

showed that the 297 (47.6%) students do not have appropriate social support which is in accordance with other studies<sup>29,30</sup>.

Our research showed that males were slightly more mindful, which is in accordance with the findings of Cresswell et al<sup>31</sup> and Pico-Alfonso et al<sup>32</sup> who showed marginal association between gender and mindfulness and males showing a greater trait mindfulness. This is opposed by the findings of MacKillop et al<sup>33</sup> and Shallcross et al<sup>34</sup> who argued that there is no gender differences and in another study by Shil et al<sup>35</sup> showed that females had more mindfulness.

In our research findings, 1<sup>st</sup> year students had more mindfulness which is in contrast to the results of Ahmadi et al<sup>28</sup> which suggested that educational status isn't related with mindfulness. These findings are also opposed by Semple et al<sup>36</sup> that all undergraduates are equally affected.

There is dearth of literature comparing the mindfulness and social support between students of public and private sector in medical and dental colleges.

## CONCLUSION

The present research concluded that every eighth medical student lacked appropriate social support and every sixth student had issues of mindfulness. A significant correlation was observed in both scales. On the basis of this study, it can be suggested that MAAS can be reliably used in our setup.

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### CONTRIBUTORS

MA conceived the idea, 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.