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EFFECT OF MODE OF EDUCATION ON STUDENTS: BURNOUT AND IMPOSTER SYNDROME

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ABSTRACT

Burnout is characterised by emotional anguish and exhaustion.In recent years, cynicism has become a topic of discussion, especially among medical students and doctors. This study seeks to explore imposter syndrome and burnout in medical students during online and face-to-face education. This cross-sectional study was done at Jhalawar Medical College during November to December 2021. Participants, between 18-25years, belonging to any academic year of MBBS discipline were included in the study. Most of the students preferred combined face-to-face and online education (67.4%). However, the current mode of education was online for 42.4% of the population and face-to-face (in-class education) for 57.8% of the population.

KEYWORDS: Burnout, Imposter, Medical Students, Modes of education.

INTRODUCTION

Burnout is characterised by emotional anguish and exhaustion.In recent years, cynicism has become a topic of discussion, especially among medical students and doctors. Medicine necessitates highly motivated and competitive students who is capable of coping with intense schooling and high expectations. Stress and disappointment levels are at an all-time high. Unfortunately, these traits have a role in the development of burnout. Burnout can manifest itself in a variety of ways, including insomnia, excessive drinking, and strained marital and family connections. Because of the epidemic, this has become much more concerning, especially among the youth. Medical students are at risk of exhaustion and burnout as a result of increased tension and anxiety, particularly due to increased screen time during lockdowns due to e-learning. The Imposter Phenomenon, which is marked by persistent emotions of

intellectual self-doubt, is another issue that has recently gained traction.[1-4] These people are doubtful of their own intelligence and ability, resulting in a lack of achievement and incompetence.[5] Imposter syndrome affects 43.8 percent of internal medicine residents, according to a research.

The imposter phenomenon has the potential to have a profound impact on medical education. Those who are suffering are less likely to speak out, clarify their questions, or give answers and information, particularly in the context of digital education.[5] Most schools and universities shuttered or switched from face-to-face instruction to online education, also known as tele-education, as a simple and convenient alternative as a result of the COVID-19 outbreak. Digital platforms such as Zoom, Skype, Google Classroom, and pre-recorded video lectures were used to continue education. However, as detailed by Mohammad H. Rajab et al., this solution was fraught with difficulties, including communication issues, student assessments, pandemic-related worry or stress, time management issues, and technological issues.[8] Tele-education, according to Panagiotis Zis et al., has a negative influence on mental health and encourages cynicism. This argues that, particularly in the age of tele-education, a curriculum that considers these aspects is necessary. Academic burnout and psychological suffering have been proven to be reduced when a mental health education course is included to the medical curriculum. This study seeks to explore imposter syndrome and burnout in medical students during online and face-to-face education.

Methodology

This cross-sectional study was done at Jhalawar Medical College during November to December 2021. Participants, between 18-25years, belonging to any academic year of MBBS discipline were included in the study. Students of other disciplines i.e. Nursing and Allied Health Sciences were excluded. The participants were invited to fill the questionnaire after taking ethical approval from Institutional ethical board by the non-probability convenience sampling technique. The estimated population size was 1050 and the calculated sample size was 564. The confidence interval is 95% and the margin of error is 5%.Microsoft Forms were used to collect data by sending the link for the form via WhatsApp. The questionnaire had 36 items divided into 3 sections; demographic profile, Oldenburg Burnout Inventory, and Clance Impostor Phenomenon Scale respectively. The demographic profile inquired regarding age, gender, discipline and year of study, the preferred mode of education, current mode of

education, and challenges faced during online learning. Oldenburg Burnout Inventory (OLBI), a 16-item scale was used to assess burnout.

The alpha Cronbach statistic for emotional exhaustion is 0.67 and for disengagement from work is 0.61. The combined alpha Cronbach statistic is 0.74.[12] OLBI measures two parameters; exhaustion and disengagement, each with 8 questions on a four-point Likert scale. Total scores for burnout ranged from 16 to 64. The degree of burnout was categorized as low, moderate, and high with a score <44, score 44-59, and score >59 respectively. Exhaustion was categorized as low, moderate, and high; score <21, score 21-29, and score >29 respectively. Disengagement was categori- zed as low moderate and high with a score <24, score 24-31, and score >31 respectively.[14] Clance Impostor Phenomenon Scale (CIPS), a 20-item 5-point Likert scale was used to quantify imposter characteristics.[15] The total score was additively ranging between 20 to 100. A score < 40 indicated few impostor characterist- ics; 41-60, moderate impostor characteristics; 61-80 frequent impostor experiences; and more than 80, intense impostor experiences. A score of 62 or higher indicated that the individual had imposter syndrome. The instrument has high internal reliability with Cronbach statistic of α=0.92.[16]

***Statistical analysis*:** All data were analyzed using SPSS software (version 27; IBM). Results have been presented in frequency and percentages. The Chi- square test was used for the comparison of categorical variables. P-value < 0.05 is statistically significant.

RESULTS

In this study, the total number of participants was 564, out of which 56% were males and 44% were female students. The mean age ±SD of the study population was 20.66 ± 1.71years. Distribution of students of preclinical and clinical sciences are shown in the table 1. Most of the students preferred combined face-to-face and online education (67.4%). However, the current mode of education was online for 42.4% of the population and face-to-face (in-class education) for 57.8% of the population. The demographic profile is shown in Table 1. The distribution of impostor scale scores for the mode of education is shown in Figure 1. The mean impostor score was 64.23 ±15.66 for the entire sample.

Table 1: Demographic profile of study population.

Variable	Number	Percentage
Gender		
Male	316	56%
Female	248	44%
Year of Study		
Pre- clinical	360	64%
Clinical	204	36%
Preferred choice of learning		
Classroom teaching (Traditional way)	20	3.5%
Combined face-to-face (in class education) and online education	382	67.4%
Online teaching	164	29.1%
Current Mode of learning		
Face-to-face (in class education)	326	57.8%
Online education	238	42.2%

Face-to-face (in-class) education had a higher rate. Imposterism was detected in 55.0 percent of the population, with 34.0 percent in face-to-face schooling and 20.9 percent in online education.

With a p-value of 0.053, the Clance Impostor Phenomenon Scale (CIPS) revealed no significant relationship between impostor features and form of learning. Table 2 provides more information.

Table 2: Association of imposter phenomenon with mode of education.

Imposter characteristics	Mode of education N (%)		p-value
	Online	Face to Face	
Few	22	20	0.00029
Moderate	98	110	
Frequent	94	118	
Intense	24	78	

The mean score for exhaustion was 21.50 ±4.18 for the entire population. Exhaustion was comparatively higher in traditional (face-to-face) education than online education (p value =0.002) as presented in Table 3. The mean score for disengagement was 12.12 ±4.64 for the entire population. Disengagement was significantly higher in online education than traditional (face-to-face) education with p value 0.001* (Table 3). The key outcomes include a higher mean total burnout and disengagement in online education but higher exhaustion in

traditional education. There was a significant association between burnout, exhaustion, and disengagement and mode of education. Imposter Phenomenon and Mode of education showed no correlation.

DISCUSSION

This study was conducted to search for an association of burnout and impostor syndrome traits with discipline, year of study, and gender. It is seen that frequency of medical students with low total burnout is higher in face-to-face education than the online education which means that the students might have had a lower burnout in the face-to-face education as they were less exposed to gadgets and lectures were more interactive which led to the fixation of attention to the actual lectures. These findings are consistent with Mheidly et al.[3] However, students were exhausted more in physical classes with a higher degree of burnout which might be because of constant lack of sleep, pretending to stay alert even though they are tired, inability to procrastinate, or roam around which leads to emotional instability.[17] Individuals having few or moderate imposter characteristics have a lower degree of burnout in domains of total burnout, exhaustion, disengagement, as seen by statistically significant results, which implies that the lesser the student is conscious of his activities or professional conduct, the better he works. Hence it shows having imposter characteristics may induce a higher degree of burnout, eventually leading him to abandon his job due to increased mental and physical stresses.[18] It is worrisome to observe that females have a higher risk of having intense imposter characteristics (13.84%) which lead to exhaustion caused by a high degree of burnout. This is similar to two studies, the first one conducted at University of Kansas Medical Center in which female students compared themselves more to others.[7] The other study was conducted in Lahore at a private medical college.[19] This certainly needs to be investigated to avoid any unprecedented, undiagnosed mental diseases which may hinder the medical department as women are a big part of the workforce there. It may be because females have an inherent ability to overthink others ’perceptions, and also are more involved in maintaining self-image; this has also been noticed in another study by Beth Levant.[9] As the year of study progresses with its new challenges, the more the individuals get intense imposter characteristics, leading to a higher degree of exhaustion. This is because as soon as the professional life comes closer, the students tend to become over conscious about their current ranking in order to avoid future ordeals, which may perhaps lead them towards problems with lower self-esteem, work related stress and emotional distress.[20] Mental health problems are on the surge as the pandemic of Covid-19 aggravates. The most susceptible

group amongst people are the medical students who have an intrinsic sense of competitiveness, ego, and hard work. Ever since day one of being admitted to medical colleges, medical students are enforced to work hard in various tests, clinical exams. This leads to the development of traits involving rigorous competitiveness and a hidden ego demands of the profession. Every day there is a new challenge to solve, which eventually leads to exacerbation of the underlying undiagnosed burnout.[20] Covid-19 has led to a worldwide pronounced quarantine to avoid the spread of infection, which meant the closure of medical schools as well. It might seem feasible on the outside, but the education and clinical skills of students were compromised, which further led to an increased sense of insecurity about themselves despite of whatever efforts they did, in online lectures, regarding the field of medicine

CONCLUSION

Medical students reported a much higher proportion of impostor characteristics, burnout, and disengagement during their online education. Traditional (face-to-face) learning, on the other hand, had a greater rate of weariness.

Recommendations

In conclusion, effective counselling should be provided to students as soon as they begin their learning to avoid future poor self-esteem and confidence issues. Medical students are the most vulnerable to psychological disorders since they are given enormous duties at such a young age. Medical students prefer to overload themselves with knowledge and tasks in order to better fulfil their duties, which is understandable given the value of a patient's life. As a result, appropriate counselling should be provided to ensure their mental health is sound**.**

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