

Assessing Major Challenges Facing the Medical Students During their Training, Taif University, Saudi Arabia

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Abstract

Original Research Article

Background: Training evaluation is a systematic approach to collecting data on medical training and using the collected data to improve employee training. Evaluation of the challenges that medical students face during their training, including the challenges, is vital to improving medical training in the future. Medical students are typically required to undertake a residency program that provides them with in-depth training. **Aims:** The aim of this study was to identify the major challenges that medical students face during their training at Taif University (TU). **Method:** A cross sectional study was carried out to identify the challenges that medical students face during their training at TU. Year 2, 3, and 4 medical students completed a self-administered questionnaire that asked them about several elements of their insights of strain, preparation, and clinical supervision. **Results:** The findings of this study show that the medical students who score high in personal well-being display higher levels of empathy. Also, the prevalence of depression among the students stood at 14% while the prevalence of anxiety was at 41%. Moreover, the study revealed that male students appear to cope better with the rigors and demands of medical education as they had poorer psychological well-being scores when compared to their female counterparts. **Conclusions:** In medical students, several professional traits appear to be undeveloped. Medical students at TU appear to be capable of reflecting and assessing the challenges that they face during their training programs. As such, they should be encouraged to reflect on their struggles at a personal level, their strengths and weaknesses, and the tools within their reach that they can utilize to overcome the identified challenges.

Keywords: Medical student, training evaluation, challenges, psychological problems, emotional challenges.

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BACKGROUND

Training evaluation is a systematic approach to collecting data on medical training and using the collected data to improve employee training. Evaluation of the challenges that medical students face during their training, including the challenges, is vital to improving medical training in the future. Medical students are typically required to undertake a residency program that provides them with in-depth training. Medical education and residency can last for several years and are valuable in ensuring that medical students gain the skills they require in areas such as laboratory work, patient care, quality control, self-care, disclosures, and medical procedures. All forms of internships, residencies, or fellowships are designed to ensure that medical students are prepared sufficiently to deal with the demands of medical practice (Piotrowski, Stulberg, & Egan, 2018). For many in the medical practice, internship, residency, and fellowship often are the busiest times in their careers (Patterson, 2020). Understanding the challenges that medical students face during their training is vital to

streamlining and partly easing their progression into the medical profession (Dewan & Norcini, 2020). For the medical profession to continue flourishing, researchers, scholars, and educators must develop an understanding of the major challenges that medical students face during their training and training evaluations (Hill, Goicochea, & Merlo, 2018). This research paper aims to identify the major challenges that medical students face during their training at Taif University (TU).

METHODS

A cross sectional study was carried out to identify the challenges that medical students face during their training at TU. Year 2, 3, and 4 medical students completed a self-administered questionnaire that asked them about several elements of their perceptions of strain, preparation, and clinical supervision. The study included an electronic databases such as, PubMed, CINAHL, and Cochrane. The keywords that were employed in the literature search included challenges, medical students, medical residents, medical education,

and medical training. The hits were examined for relevance to the subject under investigation. Other considerations included the availability of full-text versions of the articles and publications in the English language. The next section will cover the main findings from this study along with the discussion including the review of the identified sources.

RESULTS AND DISCUSSION

Psychological Problems

The pressure and demands of medical school and residency may pose a tremendous risk to the personal health and well-being of medical students in training, resulting in high rates of depression, burnout, personal distress, and anxiety. In this regards, findings of this study shows that medical students who score high in personal well-being display higher levels of empathy. Thus, the adverse psychological impacts of medical training have the potential to compromise these students' ability to practice as humane, humanistic physicians or specialists. The design of medical education and training appears to have been designed to weed out the weak and those that are not prepared for the rigors of medical practice. Consequently, medical education and residency programs tend to be very demanding on the students at the risk of their mental, physical, and psychological well-being. On the other hand, research focusing on medical students across all classes from the first year to the end of the third year revealed that there was a significant increase in the perceived stress and the number of students at risk of depression with an increase in the year (Ludwig *et al.*, 2015). Therefore, third-year students had higher perceived stress and a higher risk of depression when compared to first-year medical students (Ludwig *et al.*, 2015).

This study also targeted the students' quality of life. This cross-sectional study targeted medical students in their final two years of study in a medical degree program at TU. Validated instruments were used to collect data on the quality of life, depression, and anxiety. The findings revealed that the prevalence of depression among the students stood at 14% while the prevalence of anxiety was at 41%. Moreover, the study revealed that male students appear to cope better with the rigors and demands of medical education as they had poorer psychological well-being scores when compared to their female counterparts. The study also revealed that there was a significant association between anxiety and depression scores and the quality of life reported by the students. Overall, the quality of life of these students is adversely affected by depression and anxiety. Similarly, Gan and Yuen (2019) carried out to determine the prevalence of depression and anxiety among senior medical students in Malaysia which were the prevalence of depression among the students stood at 11% while the prevalence of anxiety was at 33%. Thus, there is a need for medical schools to implement measures aimed at the timely identification of medical students that are at risk

of anxiety and depression and ensuring that such students are provided comprehensive interventions to improve their well-being.

The data analysis involved the use of ANOVA, and t-tests. The findings revealed that medical students reported higher levels of perceived stress, anxiety, and depression than reference samples. However, there were no statistically significant differences in anxiety levels across gender, employment status, and migration background. Moreover, personal resources such as optimism, resilient coping, and self-efficacy modulated perceived stress which in turn influenced the levels of emotional distress. Heinen *et al.*, (2017) study carried out similar findings in which the medical students reported higher levels of perceived stress, anxiety, and depression than reference samples. Thus, focusing on personal resources such as resilient coping and self-efficacy among medical students has the potential to help reduce the levels of perceived stress and its emotional impacts.

Strain is a critical challenge for medical students, the findings shows gender appears to influence the vulnerability to strain among medical students. It is imperative to consider the content of medical education, the mental health of the medical students, and the content of the training programs to ensure that medical students are sufficiently supported to cope with the mental and psychological demands of medical training.

Another factor that was examined regarding the physiological problems was that there is a fear of exposure to stigmatization along with a prevailing belief that medical students and physicians should be invincible. Despite the prevailing perception of invincibility, medical students tend to suffer from various mental health challenges which are worsened by the low levels of help-seeking behavior in this group. On the other hand, a study done by Hankir *et al.*, (2014) noted that medical students tend to seek mental health services only when a crisis arises. Fear of exposure to stigmatization is one of the factors driving the fear of seeking mental health services and the concealment of mental health symptoms. Thus, there is a need for campaigns aimed at addressing the mental health stigma among and against medical students.

Emotional Challenges

There are certain situations that medical students may find challenging during their training. In this study, it was important to investigate the kind of situations that medical students found emotionally challenging during their education and the measures that they took to manage these experiences. The explanatory of this research study involved 98 medical students, and employed narrative thematic analysis. The findings revealed that most of the situations that the medical students found to be emotionally challenging occurred during clinical placement. Confronting patients' death and illness, unprofessional behavior by healthcare

professionals, dilemmas relating to the treatment of patients, approaching patients as individuals rather than diagnoses, and using patients for their learning are some of the issues that the medical students identified. Similar findings in this matter were identified by Weurlander *et al.*, (2018), which most of the situations of the medical students found to be emotionally challenging occurred during their clinical placement. Thus, the students managed their emotionally challenging experiences by either talking to their supervisors or trusted peers or by getting used to the situations.

Medical training poses a considerable threat to the well-being of medical students based on the data showing high rates of trainee burnout, mental illness, and suicide in this group. In this study, an investigation of the risk factors of suicide attempts and suicidal ideation among medical students were carried out. In term of emotional challenges, this study involved a systematic review of six electronic databases focusing on studies that reported original quantitative or epidemiological data related to suicide ideation and suicide attempts among medical students. The findings of the study revealed that poor mental health outcomes, comorbid mental illness, and stress presented the strongest indicators for suicide attempts and suicide ideation among medical students. However, Seo *et al.*, (2021), found that family history of mental illness, family history of mental history, and the use of cigarettes were not significant risk factors for suicidal ideation among medical students.

Egnew *et al.*, (2018) carried out a study to explore medical students' perception of their training about human suffering. The qualitative study involved the use of focus groups targeting 51 students from four classes in two medical schools in the United States. A considerable proportion of the students reported suffering that they attributed to their experience of medical school and the culture of medical education. Some of the sources of suffering for these medical students included isolation, confusion about personal and professional identity, witnessing the suffering of patients, families, and colleagues, and stoicism. The participating medical students also reported that their suffering led to various negative consequences including emotional distress, powerlessness, disillusionment, and dehumanization. Some of the approaches that the students employ to adapt to their suffering include emotional suppression, distraction, re-framing, and compartmentalization. The activities that promoted their well-being were guidance for sharing their experiences, small group discussion, and protected venting opportunities.

The high demands of medical education and training can interfere with other domains of life. Moreover, there is always the risk that other domains of life may interfere with medical training and education. Bergmann *et al.*, (2019) carried out a study to develop a

better understanding of the potential inter-relationship between the demands related to academics and other domains of life. The study involved 68 medical students who were recruited from a medical school in Germany. Data collection was done through eight focus group meetings. Each of these sessions was structured by a topic guide. Moreover, the sessions were recorded, transcribed, and analyzed. The findings revealed that medical education and training were perceived as linked with various personal challenges such as living alone and change in the social role of the trainee in his or her peer or social group. Permanent stress among the medical students played a major role in causing emotional exhaustion which then spilled over to other domains of life. Feelings of guilt are common among medical students that do not spend their spare time studying. The medical students also reported having little time for leisure and a healthy lifestyle. The students also reported social isolation, especially during exams. Social ties could either reduce or increase stress depending on their nature and their demands. Having or holding side jobs was perceived to increase stress due to their time demands and their contributions to poor academic performance. The personalities of these students appeared to influence their perceptions with those with high levels of conscientiousness having higher expectations regarding their academic performance which was often associated with an increase in stress levels.

Lane *et al.*, (2020) carried out a mixed-method cross-sectional survey study focusing on the exploration of medical students' perceptions of the factors that they felt were relevant to their well-being. The study involved 161 medical students. The findings revealed that nearly two-thirds of the students reported high-stress levels. Moreover, the thematic analysis revealed that the students were worried about exams, relationships, and the future. They also reported feeling worn out, irritable, and hostile. Some of the cognitive impacts included procrastination, hopelessness, poor concentration, a sense of failure, and overthinking. Sleep and appetite disturbance was reported by nearly one in three students. The medical students reported using the connection and talking, non-study activities, medication, and exercise to help them manage stress positively. On the other hand, some students reported isolation and substance use as some of their approaches to coping with the demands of medical training. None of the students that were participating in this study reported using college support services or professional help for the emotional or psychological challenges that they were facing.

From the finding of this study, it is apparent that medical students at TU face various challenges emanating from the demanding nature of medical training. The psychological and emotional challenges that these students face can be traced back to the intensive demands of medical training, the culture within medical education, the fear of stigma, and the failure to

employ some of the systems that learning institutions have implemented to help students cope with the psychological and emotional demands of medical training.

There is very little that can be done to change the nature of medical training. Thus, it is likely that the students will continue being exposed to the rigorous demands of medical education and training. However, there is something that can be done to ensure that medical students are sufficiently supported to cope with the challenges that have been identified in this paper. First, medical students should be made aware of the availability of services within their institutions that can help them cope with psychological and emotional problems that may arise from the demands of medical education or training. Importantly, these students should be encouraged to be reflective in assessing their health and well-being. By assessing themselves, they will be able to establish their performance, aspects in which they are struggling, and the nature of support or help that they may require. A culture change in medical schools could also benefit medical students and trainees. Medical students need not portray invincibility when they are suffering. Therefore, there is a need for a change in culture to one that encourages medical students to share their struggles with academics, mental health problems, psychological challenges, stress, isolation, and other challenges that have been identified in this research. In this way, the stigma that currently inhibits seeking support services can be addressed.

Individual medical students should be encouraged to take personal steps toward self-care. These students should be reminded of the value of taking rest, having enough sleep, exercising, socializing, and balanced diet to their overall performance in medical school. Moreover, they must be on the lookout for signs of stress, burnout, depression, suicidal ideation, and other negative outcomes or challenges. Teaching stress management and resilience techniques to these students could also prove beneficial in helping them remain resilient and cope with the challenges of medical training.

CONCLUSION

The study aimed to explore the challenges that medical students face during their training. The study revealed that the intensive nature of medical training and internship places considerable pressure and demands on medical students. Consequently, medical students or trainees face various challenges including elevated stress levels, suicide ideation, isolation, emotional problems, anxiety, and depression. Existing cultural expectations regarding medical students make it harder for the students to seek assistance or help for these challenges.

The main implication of the findings for medical students is the need to ensure that they take

regular stock of their well-being. They should reflect on their emotional, psychological, and social well-being. They should also investigate developing their capacity to deal with stress and employ positive coping strategies when handling emotional and psychological problems. Individual students should also seek and make use of the resources that schools offer to assist them to cope with personal and academic challenges that they may face. The results show that the medical students at TU appear to be capable of reflecting and assessing the challenges that they face during their training programs. As such, they should be encouraged to reflect on their struggles at a personal level, their strengths and weaknesses, and the tools within their reach that they can utilize to overcome the identified challenges.

For the faculty, the findings of the study highlight the need for a culture change in medical education. A culture that discourages medical students from expressing and dealing with the psychological, mental, and emotional challenges that they face could be counterproductive to the development of effective healthcare professionals. Thus, faculties should institute programs/courses aimed at ensuring that medical students are sufficiently prepared for the rigors of medical education. Moreover, these programs should also target the provision of social and psychological support while also encouraging the students to share their fears, concerns, and challenges with their peers. These measures will ensure that the medical students maintain their humanity, deal with depression, anxiety, and stress in a positive manner, and will generally help address some of the major challenges that plague these students during their training.

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REFERENCES

- Bergmann, C., Muth, T., & Loerbroks, A. (2019). Medical students' perceptions of stress due to academic studies and its interrelationships with other domains of life: a qualitative study. *Medical education online*, 24(1), 1603526.
- Dewan, M. J., & Norcini, J. J. (2020). We must graduate physicians, not doctors. *Academic Medicine*, 95(3), 336-339.
- Egnew, T., Lewis, P., Meyers, K., & Phillips, W. (2018). The suffering medical students attribute to their undergraduate medical education. *Family medicine*, 50(4), 296-299.

- Gan, G. G., & Yuen Ling, H. (2019). Anxiety, depression and quality of life of medical students in Malaysia. *Med J Malaysia*, 74(1), 57-61.
- Hankir, A. K., Northall, A., & Zaman, R. (2014). Stigma and mental health challenges in medical students. *Case Reports*, 2014, bcr2014205226.
- Heinen, I., Bullinger, M., & Kocalevent, R. D. (2017). Perceived stress in first year medical students-associations with personal resources and emotional distress. *BMC medical education*, 17(1), 1-14.
- Hill, M. R., Goicochea, S., & Merlo, L. J. (2018). In their own words: stressors facing medical students in the millennial generation. *Medical education online*, 23(1), 1530558.
- Lane, A., McGrath, J., Cleary, E., Guerandel, A., & Malone, K. M. (2020). Worried, weary and worn out: mixed-method study of stress and well-being in final-year medical students. *BMJ open*, 10(12), e040245.
- Ludwig, A. B., Burton, W., Weingarten, J., Milan, F., Myers, D. C., & Kligler, B. (2015). Depression and stress amongst undergraduate medical students. *BMC medical education*, 15(1), 1-5.
- Nechita, F., Nechita, D., Pîrlog, M. C., & Rogoveanu, I. (2014). Stress in medical students. *Romanian journal of morphology and embryology= Revue roumaine de morphologie et embryologie*, 55(3 Suppl), 1263-1266.
- Patterson, B. (2020). Continuing your medical training in the US. *bmj*, 371.
- Piotrowski, M., Stulberg, D., & Egan, M. (2018). Medical student interest in flexible residency training options. *Family medicine*, 50(5), 339-344.
- Seo, C., Di Carlo, C., Dong, S. X., Fournier, K., & Haykal, K. A. (2021). Risk factors for suicidal ideation and suicide attempt among medical students: A meta-analysis. *PloS one*, 16(12), e0261785.
- Sójka, A., Stelcer, B., Roy, M., Mojs, E., & Pryliński, M. (2019). Is there a relationship between psychological factors and TMD?. *Brain and behavior*, 9(9), e01360.
- Weurlander, M., Lönn, A., Seeberger, A., Broberger, E., Hult, H., & Wernerson, A. (2018). How do medical and nursing students experience emotional challenges during clinical placements?. *International journal of medical education*, 9, 74.