

**ASSESSING THE ANGER-PROVOKING FACTORS IN MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY.**Maleeha Iqbal¹, Rashid Ahmad², Shama Iqbal³, Humera Gabeen⁴, Yasir Khan⁵, Muhammad Bilal⁶**ABSTRACT:**

BACKGROUND: The psychological welfare of medical students holds significant importance in their academic pursuits and prospective professional trajectories. The emotion of anger is an intricate and diverse phenomenon that has the potential to exert a substantial influence on the psychological well-being of individuals pursuing medical education. This influence may extend to their academic achievements and the quality of care they provide to patients. Gaining insight into the determinants that elicit anger among medical students is imperative for the development of focused interventions and support mechanisms.

OBJECTIVE: The primary objective of this study is to examine the factors that elicit anger among medical students. This research aims to acquire a deeper understanding of the origins of anger and any potential differences between male and female medical students. The goal is to utilize this knowledge to develop effective strategies that can improve the emotional resilience and overall well-being of medical trainees. **METHOD:** The study utilized a qualitative methodology, to gather data and was carried out at Peshawar Medical College, Peshawar. The study encompassed a heterogeneous cohort of medical students, who were selected to ensure representation of different educational backgrounds and stages of training. The frequency and intensity of anger-provoking factors were evaluated using a structured questionnaire. This questionnaire covered various aspects, such as academic pressures, interpersonal relationships, and clinical experiences. The study was conducted with careful attention to ethical considerations. **RESULTS:** The survey results unveiled a diverse range of factors that incite anger, encompassing feelings of frustration, setbacks in academic pursuits, personal losses, and everyday inconveniences. Significantly, disparities based on gender were observed about these triggers. Female medical students encountered distinct difficulties associated with gender roles and societal expectations, resulting in an impact on their experiences of anger. The utilization of qualitative interviews yielded intricate and detailed narratives regarding these experiences, thereby illuminating the intricate emotional aspects of medical education. **CONCLUSION:** The study highlights the significance of acknowledging and resolving anger-inducing factors among medical students, as well as the potential disparities in these provoking circumstances. Tailored treatments and support networks play a crucial role in fostering the emotional well-being and resilience of medical students, regardless of their gender. By embracing continuous learning and practical application of Islamic teachings, individuals can effectively manage and overcome anger, fostering a composed and harmonious disposition.

KEYWORDS: Anger, emotional well-being, medical students, gender disparities, medical education.

1. Senior Lecturer, Islamic & Pakistan Studies Department. Peshawar Medical College, Warsak Road, Peshawar. Riphah International University. Islamabad. Pakistan.
2. Senior Medical Officer. Khyber Teaching Hospital, Peshawar, Pakistan.
3. Woman Medical Officer. City Hospital, Peshawar. Pakistan.
4. Lecturer, Department of Pathology, Saidu Medical College, Swat, Pakistan.
5. Senior Demonstrator, Saidu Medical College, Swat, Pakistan.
6. Assistant professor Medicine, Medical Teaching Institution, Lady Reading Hospital, Peshawar, Pakistan.

Correspondence Author: Dr. Muhammad Bilal, Assistant professor Medicine, Email: drmba@yahoo.com

How To Cite This Article: Iqbal M¹, Ahmad R², Shama Iqbal³, Humera Gabeen⁴, Yasir Khan⁵, Muhammad Bilal⁶ **Assessing The Anger-Provoking Factors in Medical Students: A Cross-Sectional Study.** JPUMHS;2024;14:01, 1-9. <http://doi.org/10.46536/jpumhs/2024/14.01.486>

RECEIVED FEB 7.2024, ACCEPTED ON 15 MARCH 2024, PUBLISHED ON 30 MARCH 2024.

INTRODUCTION

The comprehension of the distinct stressors and emotional reactions encountered by medical students holds the utmost significance in the continuously evolving realm of medical education¹. The emotion of anger, being intricate and diverse, can have a substantial influence on the overall welfare, psychological well-being, and career advancement of these prospective healthcare practitioners². Numerous scholarly investigations have been conducted to explore the determinants of anger

among medical students³. However, a significant void exists in the existing body of literature with respect to the impact of gender on these encounters. The primary objective of this article is to examine the factors that incite anger among medical students, with a particular focus on potential gender-based differences in these triggers⁴.

The process of embarking on a career in the medical field is renowned for its arduous requirements, rigorous training, and lofty

standards. The persistent demand to achieve academic excellence, uphold a harmonious equilibrium between work and personal life, and deliver exceptional care to patients, particularly in highly demanding clinical settings, can elicit diverse emotional reactions⁵. Of the various emotions, anger is a significant factor that can have a notable impact on the psychological well-being and professional growth of medical students. The phenomenon can present itself in the form of irritation, frustration, or even burnout, and its consequences have implications for patient care and the broader healthcare system⁶.

Within this context, it is imperative to acknowledge that the encounters encountered by male and female medical students may exhibit disparities as a result of societal, cultural, and systemic influences⁷. The societal constructs surrounding gender have undergone changes throughout history, yet they persist in influencing individuals' perceptions and behaviors across diverse domains⁸.

The primary objective of this research article is to examine the factors that incite anger among medical students, with a specific focus on disparities related to gender. By comprehending the distinct stressors encountered by male and female medical students, it is possible to formulate focused interventions and support mechanisms that foster the psychological well-being and general welfare of all individuals undergoing medical training. Furthermore, the examination of gender-related disparities in factors that elicit anger could potentially foster a medical education environment that is fair and inclusive, thereby augmenting the calibre of care delivered by forthcoming healthcare practitioners. To accomplish this objective, the research utilises a comprehensive mixed-methods methodology, incorporating both quantitative surveys and qualitative interviews. Our objective is to conduct a comprehensive and empirically grounded investigation of gender-related discrepancies in factors that elicit anger, utilising a varied and representative sample of medical students. The results of this study possess the capacity to provide valuable insights for medical education institutions, policy makers, and healthcare professionals regarding the necessity of employing gender-sensitive strategies to effectively address the emotional well-being of medical students.

METHOD AND MATERIAL

The present study employed a qualitative methodology, to thoroughly investigate the gender-based discrepancies in factors that elicit anger among medical students and was carried out at Peshawar Medical College Peshawar. The sample for this study consisted of medical students with varying educational backgrounds and levels of training. The primary objective of the study was to ensure the inclusion of a representative sample that would encompass a diverse array of experiences. All participants provided informed consent.

A meticulously designed questionnaire was formulated with the purpose of evaluating the various factors that incite anger among medical students. The survey encompassed inquiries regarding demographic characteristics, alongside inquiries pertaining to the frequency and intensity of factors that elicit anger. The questions were formulated with the intention of encompassing a range of factors, such as academic demands, workload, interpersonal connections, and clinical encounters.

To provide a summary of the intensity and frequency of anger-provoking factors, descriptive statistics were computed, which included means and standard deviations. The analysis was carried out by researchers in an iterative manner, involving coding, reviewing, and refining of themes, with the aim of ensuring the accuracy and reliability of the findings.

The present study was carried out in adherence to ethical protocols governing research involving human subjects. All participants provided informed consent, and they were guaranteed that their responses would be treated with confidentiality and anonymity. The study received ethical approval from the Institutional Review Board (IRB) or a comparable ethics committee at the participating institutions. The data collection period for this study was conducted within a specified timeframe, as indicated in the article, to provide contextual information for the obtained results.

RESULTS

The findings given in Table 1 offer significant insights into the determinants that elicit rage among medical students. This extensive study examines the occurrence of different events that provoke rage and their importance within the framework of medical education, using a significant sample of medical students.

Frustration is identified as a prevalent catalyst, as seen by 53.3% of participants who reported experiencing rage when their objectives are obstructed. Furthermore, a significant majority of individuals, namely 70.3%, report experiencing feelings of rage when they encounter difficulties because of the errors committed by others. The occurrence of disruptions during the pursuit of academic and professional objectives is also shown to have a notable impact, as 68% of participants report having feelings of anger in such circumstances. The survey findings indicate that a significant proportion of respondents, namely 65.1%, reported experiencing anger because of the unfortunate event of losing close ones or family members. Frequently mentioned as sources of frustration are certain scenarios, such as getting caught in traffic (85.2%) and encountering aircraft cancellations (18.4%). The heightened anger experienced by medical students may also be attributed to the loss of goods or belongings, accounting for 55% of the contributing factors.

The failure to recognise and address problems, whether they occur in a college or home setting, elicits a strong emotional response of anger in a significant majority of participants, namely 57.7%. This finding emphasises the crucial significance of identifying and confronting concerns to proactively mitigate emotional discomfort. The provocation of anger in students' emotional experiences may be attributed to the breach of social norms (33.5%) and moral standards (73.3%), hence highlighting the significance of ethical issues.

The substantial contribution to rage is attributed to the widespread disregard for personal needs (58.4%), as well as the prevalence of health conditions such as mental fatigue (82.4%) and insomnia (74.4%). The manifestation of anger triggers may be seen in the form of tension and stress, which are often accompanied by various reactions. These responses include a high level of concern for personal matters, which is reported by 68.4% of individuals, as well as the recollection of traumatic incidents, which is reported by 54.4% of individuals.

The presence of everyday annoyances, such as interpersonal disagreements with classmates (40.6%), friends (39.6%), and family members (28.3%), highlights the influence of interpersonal interactions on one's emotional well-being. The prevalence of unfair treatment, particularly in instances of unjust criticism,

significantly impacts 79.1% of the individuals surveyed, hence underscoring the need of fostering fairness within the medical education milieu.

The importance of expectations in provoking anger is evident, as a significant majority of participants (61.3%) reported experiencing anger because of disappointment stemming from unfulfilled expectations. When people perceive a lack of appreciation, a significant proportion of 36.9% indicate that they experience feelings of rage. The findings indicate that there are many notable factors contributing to anger, including an elevated burden imposed by others (51.6%), adverse environmental circumstances (41.5%), familial conflicts (63.7%), feelings of insecurity (53.3%), and financial issues (51.3%).

Religious and private discourse are significant contributors to rage episodes, with confrontation with others accounting for 54.1% and indulging in furious self-talk accounting for 43.1% of such experiences. The data provide a full comprehension of the diverse characteristics of rage triggers among the medical student population.

The study surveyed 226 people what they thought were forbidden acts in Islam. According to the results, 84% of respondents felt impacted when their self-esteem was harmed. About 32.3% of respondents said they had been seduced by riches, notoriety, or status; the same proportion said they had experienced jealousy-related rage. 77% of respondents were worried about trust violations, while 76.5% were troubled by commitment breaches and 80% felt uneasy when their secrets were revealed. Remarkably, 85% of people disapproved of meddling in private affairs. The effects of negative comments varied; 61% were impacted by criticism, while a majority of 87.6% to 88% were upset by rumours, backbiting, and jokes. These results highlight the significance of moral behaviour and interpersonal respect by Islamic beliefs, reflecting complex views towards forbidden acts as shown in Table 1.

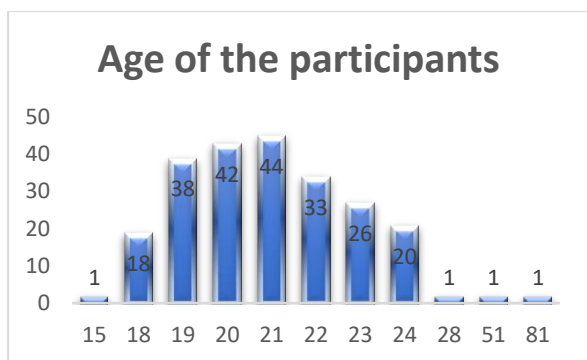


Figure 1 shows the age-wise distribution of the participants

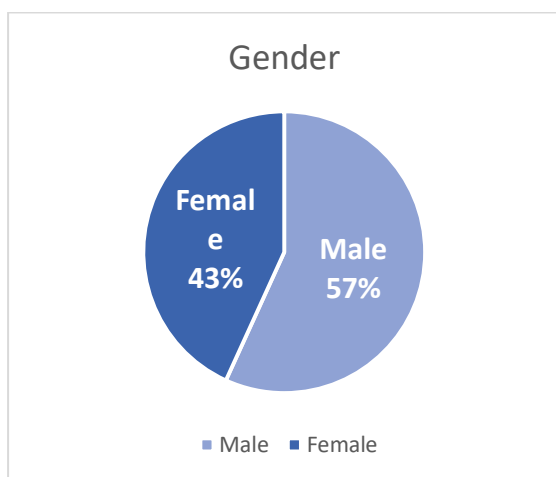


Figure 2 shows the gender-wise distribution of the participants

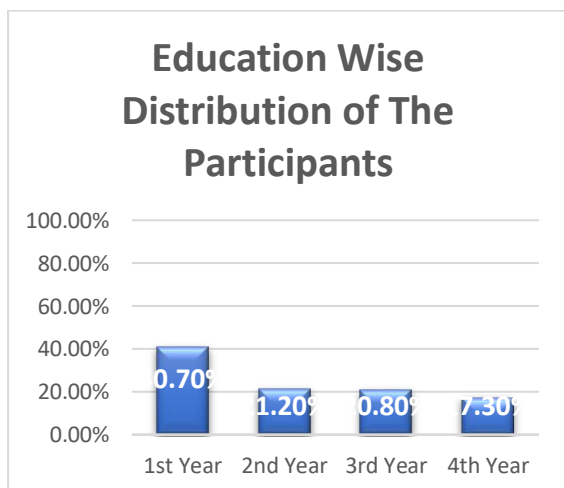


Figure 3 shows the education-wise distribution of the participants

Table 1 addresses all the questions in the current survey regarding the anger management

What Makes You Angry?	The questions asked in the Survey	Answer	Frequency (%)

Frustration	When my desire is prevented. (229 Responses)	Yes	53.3%
		No	46.7%
	When I am in trouble because of others' mistakes. (229 Responses)	Yes	70.3%
		No	29.7%
	Disruption while pursuing goals. (228 Responses)	Yes	68%
		No	32%
	Loss of loved ones or family members. (229 Responses)	Yes	65.1%
		No	34.9%
	Frustration Situation. (196 Responses)	Stuck in traffic.	167 (85.2 %)
		Flight Canceled	36 (18.4 %)
Loss of property or possessions. (220 Responses)	Yes	55%	
	No	45%	
Denial of problems at college or home. (222 Responses)	Yes	57.7%	
	No	42.3%	
When people violate. (221 Responses)	Social Norms	74 (33.5 %)	
	Moral Standards	162 (73.3 %)	
General Neglect of Personal Needs. (221 Responses)	Yes	58.4%	
	No	41.6%	
Health Issues	When I am tired. (222 Responses)	Mentally	183 (82.4 %)
		Physically	47 (21.2 %)
	When I am sleepless or hungry. (223 Responses)	Sleepless	166 (74.4 %)
		Hungry	63 (28.3 %)
	Change in appetite or diet. (224 Responses)	Yes	36.6%
		No	63.4%
	Physical Disorder like. (197 Responses)	The incident caused a physical change	41 (20.8 %)
		High Blood Pressure	18 (9.1 %)
		Diabetes Mellitus	14 (7.1 %)
		Head Aches	116 (58.9 %)
Physical Pain		45 (22.8 %)	
	Yes	60.9%	

	Bad Mood (227 Responses)	No	36.1%
Irritations	Daily Hassles (212 Responses)	Class fellow	86 (40.6%)
		Partner	29 (13.7%)
		Friend	84 (39.6%)
		Family Member	60 (28.3%)
Unfairness Being treated unfairly/mis treated.	When I am criticized unfairly. (225 Responses)	Yes	79.1%
		No	20.9%
Evaluations: They take other people's behavior personally.	Misunderstanding someone. (221 Responses)	Yes	52.9%
		No	47.1%
Expectations: How things ought to be.	When someone disappointed me. (225 Responses)	Yes	61.3%
		No	38.7%
	Not Appreciated. (222 Responses)	Yes	36.9%
		No	63.1%
Tension/Stressed: Feel tense or stressed out	Extremely worried about personal issues. (225 Responses)	Yes	68.4%
		No	31.6%
	Memories of traumatic or infuriating events. (226 Responses)	Yes	54.4%
		No	45.6%
	Increased burden by others (223 Responses)	Yes	51.6%
		No	48.4%
	Environmental conditions such as very hot, very chilled, flood, etc (224 Responses)	Yes	41.5%
		No	58.5%
	Family Dispute (223 Responses)	Yes	63.7%
		No	36.3%
	When I feel insecure. (225 Responses)	Yes	53.3%
		No	46.7%
	When my belongings are taken or broken by others. (225 Responses)	Yes	63.1%
		No	36.9%
Financial Crises (226 Responses)	Yes	51.3%	
	No	48.7%	
When I feel injustice.	Yes	88%	
	No	12%	
Religion: Deeds prohibited in Islam.	Dispute (conflict) with another person. (218 Responses)	Yes	54.1%
		No	45.9%
Private Speech: Angry and self-talk	I am going to show them, or he is always getting on my case! Such type of talk of	Yes	43.1%
		No	56.9%

	someone. (218 Responses)		
Deeds prohibited in Islam	When someone damages my self-esteem (226 individuals)	Yes	84%
		No	16%
	Greed of wealth, fame, and position. (226 individuals)	Yes	32.3%
		No	67.7%
Jealousy (sad with the pleasure of others) makes me angry. (226 individuals)	Yes	32.3%	
	No	67.7%	
Violation of trust	Deception is when someone deceives you. 226 responses)	Yes	77%
		No	23%
	Violation of commitment	Yes	76.5%
		No	23.5%
	When some disclose my secrets	Yes	80%
No		20%	
When someone interferes in personal work	Yes	85%	
	No	15%	
Insult	Critics	Yes	61%
		No	39%
	Gossips	Yes	88%
		No	12%
	Slander	Yes	87.6%
		No	12.4%
	Backbite	Yes	58.4%
		No	41.6%
joking	Yes	44.3%	
	No	55.7%	

DISCUSSION

The present study's discussion section provides an in-depth analysis of the primary results, which pertain to the examination of elements that elicit anger among medical students. Notably, the investigation places specific emphasis on discrepancies related to gender. The use of a complete mixed-methods methodology, which integrates quantitative surveys allowed a thorough examination of this intricate subject matter. This discourse includes an examination of the research's discoveries, their ramifications, and the wider framework within which they are located.

The quantitative survey conducted in this research revealed a diverse range of reasons that elicit anger among medical students. Significantly, it is worth noting that frustration emerged as a prominent catalyst, as shown by more than 70% of the participants who said that their anger was elicited when they experienced difficulties resulting from the errors made by others⁹. A significant proportion of participants (53.3%) reported experiencing frustration when their aspirations were thwarted. The study findings indicate that a considerable proportion

of individuals experienced anger due to the loss of goods or assets (55%) as well as the denial of difficulties at college or home (57.7%)¹⁰. A significant number of participants said that health-related factors, including mental and physical weariness, sleep disturbances, and hunger, influenced their feelings of rage. Factors such as unfair treatment, criticism, misconceptions, and disappointment were identified by medical students as triggers for anger, with variable percentages of students reporting these experiences¹¹.

An important and notable component of this research is to the detection of differences depending on gender in circumstances that provoke anger. The qualitative methodology in this study has contributed to a more comprehensive understanding of the survey data, offering valuable insights into the distinct obstacles encountered by female medical students. The issues were linked to gender norms and cultural expectations¹².

Female medical students have expressed feelings of rage when confronted with scenarios that include gender inequities. The observed inequalities might perhaps be attributed to the duties and expectations that individuals face within a profession that is mostly male-oriented¹³. Comprehending these discrepancies is crucial to effectively tackle the emotional well-being and resilience of female medical students. The examination of the impact of cultural norms, gender roles, and expectations on the emotional experiences of people in the medical education setting is of utmost importance¹⁴. By recognizing these discrepancies, medical educational institutions can implement interventions that target the unique requirements of female medical students, so fostering a learning environment that is more inclusive and equal¹⁵.

The integration of both quantitative and qualitative data enabled a thorough investigation of the emotional dynamics present in the field of medical education. The present study elucidated the complex and diverse array of causes that incite anger, underscoring the notion that anger experienced by medical students is not a universally homogeneous phenomenon¹⁶. Various factors, such as feelings of frustration, experiences of loss, perceptions of unjust treatment, and personal expectations, have the potential to contribute to the experience of anger. It is important to note

that the influence of these factors might differ across persons and between genders¹⁷.

Educators and institutions may effectively cater to the different needs of their students by acknowledging the situational and personal dimensions of anger, hence customizing their support and interventions accordingly¹⁸. The implementation of a customized strategy is of utmost importance in fostering the emotional well-being of medical trainees and guaranteeing their preparedness to provide patient care of exceptional quality¹⁹.

The ramifications of the study's results have considerable importance for institutions involved in medical education and healthcare practitioners. Tailored treatments and support networks play a crucial role in fostering the emotional well-being and resilience of medical students, regardless of their gender²⁰. By acknowledging and examining the gender-based discrepancies in causes that trigger rage, medical education may enhance its ability to provide students with the necessary skills to effectively manage the challenges inherent in their profession. This, in turn, can lead to improved patient care outcomes of superior quality²¹.

The perception of medical school as a source of stress necessitates a comprehensive knowledge of the emotional experiences encountered by medical students. The present research elucidates the intricate and diverse nature of anger as an emotion, while also shedding light on the existence of gender-related differences in the factors that provoke it. The emotional difficulties experienced by medical students have consequences not just for their welfare but also for the quality of patient care they provide. Recognising and effectively dealing with these problems is an essential measure in equipping the next cohort of healthcare practitioners²².

This research, which included 226 individuals, explores how Muslims see certain activities that are prohibited. The results are consistent with earlier studies in several important areas. For example, the large proportion of people (84%) who exhibit grief when something affects their sense of self-worth is consistent with other research²³ that highlights the significance of self-worth in Islamic ethics²⁴.

Furthermore, the 32.3% of respondents who acknowledged being susceptible to the lures of fame, fortune, and envious rage align with the body of research that emphasises how susceptible humans are to material cravings²⁵.

Concerns over secrets disclosure (80%), trust violations (77%), and commitment breaches (76.5%) are consistent with previous research highlighting the importance of secrecy and trust in Islamic ethics ²⁶.

The significant rejection (85%) of interfering in private matters is consistent with research showing how Islamic teachings respect individual privacy and limits ²⁷. Additionally, studies demonstrating the sensitivity to negative discourse in Islamic communities are consistent with the varied effects of negative comments, where 61% were impacted by criticism and a significant majority (87.6% to 88%) were disturbed by rumours, backbiting, and jokes ²⁸. The challenge of anger management typically stems from a lack of sufficient knowledge or implementation of Islamic principles. Consistently understanding and actively using these principles may much help in properly managing and conquering episodes of rage as they occur. Through deepening one's comprehension and active application of Islamic teachings, people may cultivate more robust strategies to manage and alleviate anger, hence cultivating a collected and harmonious demeanor in diverse circumstances.

It is important to recognise and appreciate the inherent constraints and limitations associated with this research. The results were obtained from a distinct sample of medical students. The potential for response bias may arise due to the reliance on self-reporting in the survey data. Moreover, while the primary emphasis of this research was on discrepancies related to gender, it is important to acknowledge that several demographic and cultural variables may also play a role in shaping the experiences of rage among medical students.

Subsequent investigations in this domain need to endeavour to examine a more comprehensive and heterogeneous cohort of medical students to include a wider spectrum of experiences. Longitudinal studies have the potential to provide valuable insights into the temporal progression of anger-provoking events within the context of medical training. In addition, doing an analysis of the effects of treatments aimed at addressing these issues on the emotional well-being of medical students would provide a significant opportunity for future scholarly inquiry.

CONCLUSION

The study's findings highlight the need to acknowledge that anger is a common emotional reaction among medical students and the necessity of addressing the triggers for it as well as any possible gender-related differences. To improve the mental health and resilience of medical students—male and female alike—tailored treatments and support systems are necessary. This will help the students become more resilient and ready for the challenges of their careers and provide patients with high-quality care. Medical education institutions may foster a more inclusive and fair learning environment and better prepare future healthcare professionals to face the obstacles that come with their jobs by placing a higher priority on the mental well-being of their students. Moreover, by embracing continuous learning and practical application of Islamic teachings, individuals can effectively manage and overcome anger, fostering a composed and harmonious disposition.

ETHICS APPROVAL: The ERC gave ethical review approval.

CONSENT TO PARTICIPATE: written and verbal consent was taken from subjects and next of kin.

FUNDING: The work was not financially supported by any organization. The entire expense was taken by the authors.

ACKNOWLEDGEMENTS: We are thankful to all who were involved in our study.

AUTHORS' CONTRIBUTIONS: All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated in the work to take public responsibility of this manuscript. All authors read and approved the final manuscript.

CONFLICT OF INTEREST: No competing interest declared.

REFERENCES

1. Abdulghani HM, AlKhanhal AA, Mahmoud ES, Ponnampereuma GG, Alfaris EA. Stress and its effects on medical students: a cross-sectional study at a college of medicine in Saudi Arabia. *J Health Popul Nutr*. 2011;29(5):516-22.10.3329/jhpn.v29i5.8906.

2. Ruiz-Fernández MD, Ortiz-Amo R, Andina-Díaz E, Fernández-Medina IM, Hernández-Padilla JM, Fernández-Sola C, et al. Emotions, Feelings, and Experiences of Social Workers While Attending to Vulnerable Groups: A Qualitative Approach. *Healthcare (Basel)*. 2021;9(1):10.3390/healthcare9010087.
3. Prabhu GS, Tam Min Yen J, Posko Amalaraj JJ, Tan Yie Jone E, Kumar N. Anger Management among Medical Undergraduate Students and Its Impact on Their Mental Health and Curricular Activities. *Education Research International*. 2016;2016:7461570.10.1155/2016/7461570.
4. Graves BS, Hall ME, Dias-Karch C, Haischer MH, Apter C. Gender differences in perceived stress and coping among college students. *PLoS One*. 2021;16(8):e0255634.10.1371/journal.pone.0255634.
5. A new world of residency education: game changers and proven practices: 2021 Virtual International Conference on Residency Education. *Can Med Educ J*. 2021;12(4):157-246.10.36834/cmej.73400.
6. Maslach C, Leiter MP. Understanding the burnout experience: recent research and its implications for psychiatry. *World Psychiatry*. 2016;15(2):103-11.10.1002/wps.20311.
7. Dahal P, Joshi SK, Swahnberg K. A qualitative study on gender inequality and gender-based violence in Nepal. *BMC Public Health*. 2022;22(1):2005.10.1186/s12889-022-14389-x.
8. Gurieva SD, Kazantseva TV, Mararitsa LV, Gundelakh OE. Social Perceptions of Gender Differences and the Subjective Significance of the Gender Inequality Issue. *Psychol Russ*. 2022;15(2):65-82.10.11621/pir.2022.0205.
9. Ahmed SI, Uneeb SN, Bareeqa SB, Ibrahim S, Muneer S, Humayun SH, et al. Prevalence of Anger in Medical Students: A Tertiary Care Experience from a Developing Country. *Cureus*. 2019;11(3):e4258.10.7759/cureus.4258.
10. Tomás CC, Oliveira E, Sousa D, Uba-Chupel M, Furtado G, Rocha C, et al. Proceedings of the 3rd IPLeiria's International Health Congress. *BMC Health Services Research*. 2016;16(3):200.10.1186/s12913-016-1423-5.
11. Saghir Z, Syeda JN, Muhammad AS, Balla Abdalla TH. The Amygdala, Sleep Debt, Sleep Deprivation, and the Emotion of Anger: A Possible Connection? *Cureus*. 2018;10(7):e2912.10.7759/cureus.2912.
12. Jalil A, Mahmood QK, Fischer F. Young medical doctors' perspectives on professionalism: a qualitative study conducted in public hospitals in Pakistan. *BMC Health Services Research*. 2020;20(1):847.10.1186/s12913-020-05681-w.
13. Kristoffersson E, Andersson J, Bengs C, Hamberg K. Experiences of the gender climate in clinical training – a focus group study among Swedish medical students. *BMC Medical Education*. 2016;16(1):283.10.1186/s12909-016-0803-1.
14. López-Madrugal C, de la Fuente J, García-Manglano J, Martínez-Vicente JM, Peralta-Sánchez FJ, Amate-Romera J. The Role of Gender and Age in the Emotional Well-Being Outcomes of Young Adults. *Int J Environ Res Public Health*. 2021;18(2):10.3390/ijerph18020522.
15. Verbree A-R, Isik U, Janssen J, Dilaver G. Inclusion and diversity within medical education: a focus group study of students' experiences. *BMC Medical Education*. 2023;23(1):61.10.1186/s12909-023-04036-3.
16. Guetterman TC, Fetters MD, Creswell JW. Integrating Quantitative and Qualitative Results in Health Science Mixed Methods Research Through Joint Displays. *Ann Fam Med*. 2015;13(6):554-61.10.1370/afm.1865.
17. Chaplin TM. Gender and Emotion Expression: A Developmental Contextual Perspective. *Emot Rev*. 2015;7(1):14-21.10.1177/1754073914544408.
18. Lee HJ, Kang YJ, Lee S-H, Lin Y, Kim D-H, Ihm J. Relationship matters: a qualitative study of medical students' experiences in a learner-driven research program in South Korea. *BMC Medical Education*. 2023;23(1):337.10.1186/s12909-023-04337-7.
19. Søvold LE, Naslund JA, Kousoulis AA, Saxena S, Qoronfle MW, Grobler C, et al. Prioritizing the Mental Health and Well-

- Being of Healthcare Workers: An Urgent Global Public Health Priority. *Frontiers in Public Health*. 2021;9.10.3389/fpubh.2021.679397.
20. Barbayannis G, Bandari M, Zheng X, Baquerizo H, Pecor KW, Ming X. Academic Stress and Mental Well-Being in College Students: Correlations, Affected Groups, and COVID-19. *Frontiers in Psychology*. 2022;13.10.3389/fpsyg.2022.886344.
 21. Stamarski C, Son Hing L. Gender inequalities in the workplace: the effects of organizational structures, processes, practices, and decision makers' sexism. *Frontiers in Psychology*. 2015;6.10.3389/fpsyg.2015.01400.
 22. Weurlander M, Lönn A, Seeberger A, Hult H, Thornberg R, Wernerson A. Emotional challenges of medical students generate feelings of uncertainty. *Med Educ*. 2019;53(10):1037-48.10.1111/medu.13934.
 23. Ishaq B, Østby L, Johannessen A. Muslim religiosity and health outcomes: A cross-sectional study among muslims in Norway. *SSM Popul Health*. 2021;15:100843.10.1016/j.ssmph.2021.100843.
 24. Koenig HG. Religion, spirituality, and health: the research and clinical implications. *ISRN Psychiatry*. 2012;2012:278730.10.5402/2012/278730.
 25. Gordon HM, Lyon TD, Lee K. Social and cognitive factors associated with children's secret-keeping for a parent. *Child Dev*. 2014;85(6):2374-88.10.1111/cdev.12301.
 26. Wisenbaker Jr RC. Muslim Community Reparations. *Savannah L Rev*. 2015;2:391
 27. Alshech E. Out of sight and therefore out of mind: Early Sunnī Islamic modesty regulations and the creation of spheres of privacy. *Journal of Near Eastern Studies*. 2007;66(4):267-90
 28. Nowak M, Vospernik T. Permissible restrictions on Freedom of Religion or Belief. *Facilitating freedom of religion or belief: A deskbook*: Brill Nijhoff; 2004. p. 147-72.