

Faith, Friends, and Humor: How Medical Students Cope with Academic Stress in a Private Medical University in Saudi Arabia

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Purpose: The primary objective of this study was to assess the various coping strategies that medical students at Alfaisal College of Medicine use to adapt to stressors and adversities faced in a medical school environment.

Methods: This cross-sectional study utilized an online questionnaire distributed to medical students (aged 18+) at Alfaisal University from March 15 to April 30, 2023. Inclusion criteria focused on College of Medicine students from Years 1 to 5. The survey assessed stressors and coping strategies, with a modified Brief COPE scale for relevance. A target sample of 240–290 participants was calculated for a 95% confidence level. Data were analyzed using SPSS, applying descriptive statistics and Chi-Square tests. Ethical approval was obtained from the Institutional Review Board, ensuring confidentiality and voluntary participation.

Results: The most common stressors were high parental expectations, academic workload, frequent examinations, self-esteem issues, and sleep deprivation. The most frequently employed coping strategies included spiritual, religious beliefs and practices, stress acceptance, emotional support from family and friends, and humor. This study highlights the coping mechanisms adopted by medical students in Saudi Arabia to address academic challenges.

Conclusion: Understanding the preferred coping techniques in Alfaisal University medical students and recognizing the importance of spiritual well-being and social support can inform interventions to improve both academic performance and mental well-being in this population.

Keywords: coping strategy, academic stress, medical students, well-being

Introduction

It is widely recognized that the pursuit of a medical degree can be a demanding and arduous journey that introduces taxing stressors into the lives of medical students.¹ Stress can arise from various sources such as work or academic responsibilities, interpersonal conflicts, financial difficulties, health problems, and/or any life-altering events. Academic stress, particularly among university students, has garnered significant research interest over the years. Studies have shown that depending on the duration and severity of stress, its negative effects can include hindrance of cognition, learning, and memory.² In the context of medical schools, specific stressors include heavy academic workloads and frequent examinations, which can create a relentless pressure to perform. Additionally, the lack of adequate rest and sleep exacerbates these challenges, leaving students physically and mentally fatigued. Personal issues, such as parental expectations and interpersonal conflicts, further compound stress levels. Many students also grapple with self-esteem problems, which can lead to feelings of inadequacy and heightened anxiety about their academic performance.

While academic stress is widely studied, there is a notable lack of research on culturally specific coping strategies among students in the Middle East, particularly in Saudi Arabia. This study seeks to address this gap by examining the stressors and coping mechanisms of medical students, with a focus on the influence of cultural factors such as spirituality and social expectations. By delving into this unique context, we aim to provide insights that will inform targeted mental health interventions and enhance support structures for students in the region.

Research in health and management has shed light on categorizing types of stress, revealing a more nuanced perspective that recognizes the potential for stress to positively impact academic performance.^{3,4} It is now recognized that certain stressors, when perceived as goal-relevant and manageable, can enhance motivation, performance, and adaptability among students. However, there is a growing understanding that the medical school environment often creates stressors that are viewed as goal-relevant but unmanageable (ie, hindering). These stressors have the potential to impede performance and give rise to maladaptive behaviors among medical students. This suggests that the overall environment in medical schools may be more conducive to stress, resulting in negative outcomes, rather than stress that fosters a challenging and growth-oriented environment. Chronic stress contributes to significant mental health decline among medical students, including high rates of depression, anxiety, burnout, and even suicidal ideation.^{5,6}

To withstand stress and mitigate its negative effects, it is crucial that medical students adopt and integrate effective coping strategies into their lives. Coping theory is defined as

constantly changing cognitive and behavioral efforts to manage specific external and internal demands that are appraised as taxing or exceeding the resources of the person.⁷

By implementing appropriate coping mechanisms, medical students can effectively manage stress, bolster resilience, and promote overall mental well-being.

Many studies divide coping strategies into different categories or themes.⁸ In this study, coping strategies can generally be divided into three categories: emotion-focused, problem-focused, and avoidant/passive. While the level of relief provided by each coping mechanism may vary among individuals, emotion- and problem-focused strategies are generally considered adaptive, whereas avoidant/passive strategies are deemed maladaptive.⁹ Emotion-focused strategies include seeking emotional support, utilizing humor, finding solace in religion, and practicing acceptance. Problem-focused strategies include active coping, seeking instrumental support, engaging in positive reframing, and effective planning. In contrast, self-distraction, venting, self-blame, denial, substance use, and behavioral disengagement are avoidant/passive.

A review of literature showed a paucity of studies and data on the various coping strategies employed by students to adapt to the university environment in Saudi Arabia. One study conducted at King Saud University College of Medicine in Riyadh, Saudi Arabia, explored the perception of stress and coping strategies among first-year medical students.¹⁰ The study identified stress factors such as lack of time, excessive subject content, and family problems, and highlighted coping strategies such as setting priorities and participating in leisure activities. Another study by Abouammoh et al¹¹ focused on stress coping strategies among medical students and trainees in Saudi Arabia, emphasizing the importance of stress management programs to enhance coping skills. Additionally, Elzubeir et al¹² conducted a study examining stress and coping strategies among Arab medical students, shedding light on the challenges they face and the coping mechanisms they employ. Similar studies have been conducted for students of different healthcare disciplines, such as dental and nursing students in Saudi Arabia,^{13–15} as well as studies specifically focusing on the coping strategies of medical students during the COVID-19 pandemic.¹⁶

The primary objective of our study was to evaluate the coping strategies employed by medical students at Alfaisal College of Medicine in response to academic stressors and adversities. By analyzing the frequency and effectiveness of these strategies, we aim to uncover the adaptive mechanisms these students use to manage stress. The insights gained from this study can inform the development of targeted interventions and support programs designed to enhance the well-being, resilience, and academic performance of medical students at Alfaisal. Furthermore, by highlighting the specific coping strategies within this educational setting, our research contributes to a broader understanding of stress management in the Middle East, where cultural factors may influence coping mechanisms differently than in Western regions.

Methods

For this cross-sectional study, an online questionnaire was created through Google Forms, and a URL was distributed to students for a period of two months. The survey was sent from March 15, 2023, until April 30, 2023, and shared via Email and WhatsApp Messenger. The targeted audience for this study are medical students (aged 18 years or older) enrolled in Alfaisal University, Riyadh.

As part of this research, the inclusion criteria includes participants who are enrolled full time in College of Medicine (CoM) from Year 1 to Year 5 (inclusive of participants conducting internships. The study was inclusive of both genders, male and female). The exclusion criteria for the research states such that the participants must not be: 1) any non-medical students, 2) students enrolled in the University Preparatory Program (UPP) program Alfaisal University, 3) students from other universities, and lastly 4) participants who are not currently enrolled in Medical School.

Survey

The questionnaire consists of 13 questions to identify the stressors in the participant's everyday life and what coping strategies they use to combat them. We asked participants to answer these questions on how they respond to stress and if they apply their various coping mechanisms, not if said mechanisms are successful or not. The survey contains 4 sections. The first section included questions that asked participants how they usually respond to stress and what factors were added to their stress in their freshman year. The second section addresses demographic aspects, including gender, academic year, nationality, high-school education program, current GPA, and completion of the university preparatory program. The purpose of including such demographic information is to gain an insight into the various coping mechanisms for medical students. The information is therefore provided by participants in the form of a survey. The third section included questions about physical and mental health conditions, the level of stress they faced in freshman year, and details on sleeping difficulty and duration. The final component focuses on participants' coping mechanisms, utilizing a modified version of the Brief COPE inventory scale tailored to enhance the relevance of our research.

The questionnaire targeted current medical students from years 1 to 6 of both genders (aged 18 and above) in Alfaisal University, and all participants who did not meet those requirements were excluded from the study. Since the number of medical students at Alfaisal University is 1200, we calculated our target sample to be in a range of 240–290 students to achieve a 95% confidence level with a 5% confidence interval. We requested participants to respond to their reactions to stress and whether they employ different coping mechanisms, without focusing on the effectiveness of these strategies. The questionnaire was voluntary, confidential, and anonymous, allowing only the principal investigators (PI) and co-PI access to the responses.

Statistical Analysis

Data extraction from the survey was conducted independently and subsequently filtered manually to adhere to the inclusion criteria. Simple random sampling was utilized. SPSS was used for data management and statistical analysis. A range of 250–290 students were accepted as a good sampling size for the College of Medicine (CoM) students. This has been calculated using Statistical Package for Social Sciences (SPSS) to gain a 95% confidence level and a 5% confidence interval from a total CoM student's population of 1200. The information was meticulously organized into demographic variables, groups of stressors, and independent variables using Microsoft Excel. Descriptive statistics were carried out by reporting the number and percentage for the factors mentioned in the survey. Associations with gender and clinical years were carried out by the Chi-Square Test or Fisher's Test, as applicable. The Chi-Square Test assumptions were checked prior to the analysis. P-value <0.05 was considered to be statistically significant.

The Brief COPE scale was used in this study to measure the students' behaviors. The scale can assess the following scale such as measuring students' active coping, acceptance, behavioral disengagement, emotional and instrumental support, planning, humor, religion, substance use, venting and self blame. The survey is capable of measuring the participants' positive reframing as well as denial into the survey. The survey's strong reliability coincides well with student's coping strategies.¹⁷ The Brief COPE scale was modified to increase the relevance to our research.

Ethical Considerations

A confidentiality agreement for students and individuals was regarded as part of this research. Personal identifying information such as names and college IDs was not collected to ensure confidentiality. Participation was voluntary, and consent was obtained from the participants to be part of this study. Ethical approval was obtained from the Institutional Review Board of Alfaisal University (approval number: IRB-20202, 30/01/2023). All participants were informed about the purpose of the study and provided informed consent in accordance with the *Declaration of Helsinki*.

Results

Demographic characteristics of the participants are given in Table 1. The total number of participants was 275. The majority of participants consisted of females 70.2%- and first-year medical students 38.9%. The three most common nationalities amongst the participants were Saudi Arabian (24.4%), Syrian (17.1%), and Indian (9.5%). As for GPA, 23.3% of students had a GPA of up to 2.9, 32.7% had a GPA of 3.0–3.4, and (44%) had a GPA of 3.5–4.0. Almost 31% of students had done the University Preparatory Program (UPP) before admission to medical school. The UPP is considered a bridging year before officially starting the first year of medical school.

In terms of adjusting to the first year of medical school, approximately 175 (63.6%) of students identified first year as extremely or very stressful, while (34.6%) felt it was mild/moderately stressful. Almost 220 (80%) reported having six or less hours of sleep every night, with only 20% reporting an adequate seven to nine hours of sleep. About 50.6% reported a moderate to high difficulty falling asleep every night during the first year of medical school.

Regarding certain physical and mental health problems, 32.7% of participants reported having certain ongoing health conditions. The most common physical health issues among the participants were obesity (4.4%) and asthma (4.4%), while the most common mental health issues were anxiety (22.8%) and depression (16.4%).

The most common stress factors identified by students are given in Table 2 and the coping strategies adopted by students are given in Table 3 and cross tabulated against gender and year of study.

Discussion

Coping strategies are the behavioral and psychological techniques people use to control, lessen, tolerate, or minimize stressful situations. “Active coping” refers to moving toward eliminating or avoiding the stressor; “acceptance” is acknowledging that the stressful event happened and that it is real; and “planning” is considering how to deal with the stressor and organizing one’s coping strategies. Making the most of the circumstance by learning from it or viewing it in

Table 1 Demographics of the Participants

Variables	n (%)
Gender	
Female	193 (70.2%)
Male	82 (29.8%)
Year of study	
First year	107 (38.9%)
Second year	88 (32.0%)
Third year	39 (14.2%)
Fourth year	10 (3.6%)
Fifth year	16 (5.8%)
Internship	15 (5.5%)
Curriculum before admission to the college of medicine	
American	113 (41.1%)
British	60 (21.8%)
Saudi	85 (30.9%)
Other	17 (6.2%)

Table 2 Factors Leading to Stress in First Year of Medical School

Response	Gender			Phase of Study		
	Male	Female	P-value*	Preclinical [†]	Clinical [‡]	P-value*
High parental expectations	40 (48.8%)	93 (48.2%)	0.928	113 (48.3%)	20 (48.8%)	0.954
Health Issues	13 (15.9%)	51 (26.4%)	0.058	55 (23.5%)	9 (22.0%)	0.828
Academic Workload	54 (65.9%)	163 (84.5%)	0.001	184 (78.6%)	33 (80.5%)	0.788
Frequency of Examination	41 (50.0%)	115 (59.6%)	0.303	129 (55.1%)	27 (65.9%)	0.395
Self-Esteem Problems	36 (43.9%)	119 (61.7%)	0.007	136 (58.1%)	19 (46.3%)	0.161
Lack of Sleep/Rest	50 (61.0%)	120 (62.2%)	0.851	148 (63.2%)	22 (53.7%)	0.244
Personal Relationships	31 (37.8%)	75 (38.9%)	0.869	91 (38.9%)	15 (36.6%)	0.780

Note: [†]year 1-3, [‡]year 4-6, *p-value indicates there is a significant difference.

Table 3 The Most Common Coping Strategies Using BRIEF COPE

Response	Gender			Phase of Study		
	Male	Female	P-value*	Preclinical [†]	Clinical [‡]	P-value*
I get emotional support from others	32 (39.0%)	105 (54.4%)	0.020	116 (49.6%)	21 (51.2%)	0.846
I make jokes about it	60 (73.2%)	148 (76.7%)	0.535	179 (76.5%)	29 (70.7%)	0.428
I find comfort in my spiritual beliefs	65 (79.3%)	161 (83.4%)	0.411	198 (84.6%)	28 (68.3%)	0.012
I learn to accept it and live with it	61 (74.4%)	132 (68.4%)	0.320	163 (69.7%)	30 (73.2%)	0.650
I take action and attempt to make my situation better	55 (67.1%)	104 (53.9%)	0.043	136 (58.1%)	23 (56.1%)	0.809
I get advice and help from other people	29 (35.4%)	100 (51.8%)	0.012	107 (45.7%)	22 (53.7%)	0.348
I try to make light of the situation in an attempt to make it seem more positive	45 (54.9%)	105 (54.4%)	0.942	127 (54.3%)	23 (56.1%)	0.829
I try to come up with different strategies about what to do	50 (61.0%)	113 (58.5%)	0.708	144 (61.5%)	19 (46.3%)	0.068

Notes: [†]year 1-3, [‡]year 4-6, *p-value indicates that there is a significant difference.

a more positive way is known as “positive reframing”. “Behavioral disengagement” refers to giving up or removing efforts from the endeavor to achieve the goal that the stressor is interfering with, whereas “denial” is an attempt to reject the truth of the stressful event.^{18,19}

Stress Factors

The most common stress factors identified by students included the rigorous academic workload, increased frequency of examinations, lack of sleep and high parental expectations. Similar findings are reported by other studies around the world.^{10,12,14,16,19} Frequent examinations are a substantial cause of stress, as demonstrated by the current study and previously published research, but they are also crucial for assessing students’ performance and motivating them to learn and progress in the medical school.¹⁰ Thus, in order to reduce stress, medical educators should make improvements to the frequency of examinations that the medical students need to take.^{10,12} Reducing the frequency of exams can alleviate continuous pressure, allowing students more time to consolidate their knowledge and manage their mental health more effectively.

Given the demanding nature of medical education, which entails long study hours and rigorous clinical commitments, inadequate sleep becomes a prevalent issue among students, leading to chronic sleep deprivation. In their pursuit of meeting the demands of their studies, students often find themselves sacrificing precious hours of sleep. Over time, this can result in a myriad of negative consequences, including impaired cognitive function, decreased learning and academic performance, increased stress and mental health issues, potential physical health problems, and safety concerns due to reduced alertness and impaired decision-making abilities.^{20,21} Medical educators could implement interactive workshops that focus on effective sleep hygiene, such as maintaining a regular sleep schedule, creating a restful environment, avoiding caffeine and electronic devices before bedtime, and practicing relaxation techniques. Additionally, providing

access to Cognitive-Behavioral Therapy for Insomnia (CBT-I) through counseling programs can help students change thoughts and behaviors that negatively affect their sleep, further improving their sleep quality and overall well-being.²²

As for parental expectations as a stress factor, the full extent of its impact on students' lives may not always be readily apparent. The pressure to meet or exceed their parents' expectations can create a constant sense of striving for perfection and can contribute to feelings of anxiety and self-doubt. The weight of these expectations can be overwhelming and create a sense of heaviness, as if they are carrying the hopes and dreams of their parents on their shoulders.

One reason why parental expectations may not be readily apparent is that they can be deeply ingrained and internalized by the student.²³ From a young age, children may absorb the belief that their worth and identity are tied to meeting their parents' expectations. This can create an internal pressure to excel academically and professionally, even if parents do not explicitly communicate their expectations. Furthermore, parental expectations can manifest in more nuanced ways, such as making comparisons to other successful individuals, subtle expressions of disappointment, or continuously inquiring about academic progress. These indirect forms of pressure can be difficult to recognize, but over time, their cumulative effect can impact a student's psychological well-being.

Additionally, the impact of parental expectations on stress levels and self-esteem can be more pronounced in non-Western cultures.²⁴ In many non-Western cultures, such as the Middle East, there is greater emphasis placed on respect and obedience towards parents. Moreover, in many non-Western societies, the pursuit of a medical career is often seen as a highly esteemed and secure path to success. Parents may invest significant resources, both financially and emotionally, in their children's education, hoping for a future return on their investment. In many cases, students may feel pressured to pursue careers in medicine or other demanding fields even if they lack personal interest in these areas. This cultural context makes it crucial to address parental expectations, as the pressure can significantly contribute to students' stress levels and impact their overall well-being and academic performance. One practical intervention is to provide counseling programs that include family counseling sessions to help manage these expectations and support students in setting realistic and personal academic goals. Such a program could include workshops and informational sessions that highlight the rigorous nature of medical training, the importance of mental health, and the need for realistic and supportive parental involvement. In this way, universities can encourage a family environment that acknowledges and supports students' individual aspirations and learning capacities.

Coping Strategies

The most common coping strategies reported by students at Alfaisal were seeking refuge in their spiritual beliefs, making light of the situation with jokes and humor, and learning to accept and live with the situation. Spiritual and religious beliefs as a coping strategy and its usefulness has been reported extensively in literature.²⁵ In one study, students who scored lower on spiritual well-being and daily spiritual encounters reported higher levels of psychological discomfort and burnout, while those with better scores on these two metrics said they were generally happier with their lives.²⁵ Religious or spiritual beliefs can provide individuals with a sense of purpose, meaning, and direction in life. This sense of purpose can be particularly vital during challenging times, providing individuals with solace and comfort as they navigate through life's trials and tribulations. In the context of challenging academic curriculums, religion can help spiritual individuals stay grounded by reminding them that their worth and purpose extend beyond academic achievements. There is growing evidence that religious involvement is associated with better physical health, better mental health, and longer survival.^{26,27} Other studies indicate that coping strategies rooted in religion or spirituality are linked to increased resilience against the psychological and physical strains encountered in the medical school and medical field in general.²⁵ This study's findings imply that a strong spiritual foundation is linked to reduced psychological distress and burnout as well as increased life satisfaction. Having a strong spiritual life may shield medical students from burnout and help them to cope with the stressful university environment.^{25–27}

Spirituality as a coping strategy is especially relevant in the Middle East, where cultural and religious values are deeply ingrained in daily life. The emphasis on spirituality as a coping mechanism highlights a unique cultural dimension that differentiates this study from similar research conducted in Western settings. To leverage these findings, we propose the implementation of stress management programs that emphasize spiritual well-being. For example, universities can provide access to meditation and prayer rooms, offer regular spiritual workshops, and organize retreats that focus on

spiritual growth and stress relief. These initiatives can help students draw strength from their spiritual practices, fostering a sense of peace and resilience amidst academic pressures.

The use of humor as a coping strategy is widely regarded as beneficial, particularly in managing stress and facilitating socialization.^{28,29} Humor aids in emotional regulation by providing a temporary distraction from negative feelings and shifting focus to a more positive state. It creates psychological distance from stressors, allowing for a different perspective that reduces their perceived severity. Furthermore, humor serves as a valuable coping mechanism for medical students, helping them navigate the inherent uncertainty and unpredictability that are characteristic of the field of medicine. By finding humor in challenging situations, students gain a sense of control and relief despite the seriousness and complexity of their work. Additionally, humor fosters social bonding by allowing students to share humorous experiences and engage in light-hearted banter. Finally, humor serves as an outlet that allows students to temporarily release tension and experience a sense of well-being, even amidst demanding situations and heavy workloads.

Acceptance can be defined as embracing one's emotions, thoughts, and physical sensations without attempting to modify, control, or avoid them. It entails being receptive to internal experiences and demonstrating a willingness to remain engaged with those experiences, even when they may be uncomfortable or difficult to endure.^{30,31}

Learning to accept and live with the challenges and uncertainties of the medical field is an adaptive coping strategy that can benefit medical students. By embracing acceptance, students can regulate their emotions, enhance psychological well-being, reduce stress, foster adaptability, and build resilience. Acceptance allows students to let go of unnecessary worry and focus on finding constructive ways to navigate the realities of their profession, ultimately promoting a healthier and more balanced approach to their personal and professional growth.

The students in this study adopted mostly active coping strategies, with more than 50% of students of both genders reporting taking action and attempting to make their situation better. Similar findings are reported from other studies from the region.^{10,11,19}

One of the most significant findings of this study was students reporting taking help from others to cope with academic stress. This can include peers, seniors, and faculty members, and this is a positive attitude towards overcoming stress.³² Interventions such as mentorship programs, peer support programs, and social bonding activities can create a robust support network, helping students feel more connected and less isolated.

Conclusion

This study explored the most common coping strategies utilized by medical students at a private Saudi university to navigate the rigorous demands of their academic environment. Findings reveal that students frequently face stressors such as an intense workload, frequent examinations, sleep deprivation, and high parental expectations. In response, students primarily used active coping techniques, including spirituality, humor, and seeking assistance from others, with both genders showing similar preferences.

A robust spiritual foundation emerged as a key protective factor, as students with strong spiritual and religious beliefs appeared to experience reduced stress and burnout. This highlights a cultural inclination toward resilience through spirituality and social support networks. Another notable finding was students' eagerness to seek help from peers, upperclassmen, and faculty members, emphasizing the potential of mentorship programs to bolster academic and emotional support.

Medical educators could consider moderating examination frequency to balance assessments with students' mental well-being. Additional interventions could include interactive workshops on sleep hygiene and cognitive-behavioral therapy for insomnia (CBT-I) to address chronic sleep deprivation, which many students experience. Implementing regular spiritual workshops and creating dedicated spaces for prayer and meditation may further support students' spiritual well-being. By cultivating peer mentorship programs and accessible counseling services, universities can build robust support structures that empower students to manage academic stress and improve their overall mental health and academic performance.

Ultimately, this study provides valuable insights into the coping strategies employed by medical students in Saudi Arabia to overcome the challenges in their academic environment. By understanding these preferred coping techniques and recognizing the importance of spiritual well-being and social support, educational institutions can implement targeted

interventions that foster resilience and improve both academic success and mental health outcomes. These findings contribute to a deeper understanding of culturally relevant coping strategies, offering a foundation for developing programs that address the specific needs of medical students and support their personal and professional growth.

Limitations of the Study

This study was conducted solely at Alfaisal University, which may limit the generalizability of the findings to other medical student populations or institutions. Different institutions may have unique stressors and coping strategies that were not captured in this study. In addition to that, some questions in the survey may be subjected to recall bias, as the participants in later years may not accurately remember or report their experiences in their first year of medical school. As participation in the study was voluntary, there is a possibility of selection bias. The students who chose to participate may have unique characteristics or experiences compared to those who opted not to participate, and this could affect the representativeness of the sample.

Disclosure

The author(s) report no conflicts of interest in this work.

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