Time Management and Urgency Index of Medical and Dental Students and Factors associated with Urgency Addiction

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Abstract

Introduction: Time management is considered a significant skill for medical students, it has a direct impact on their academic performance and future careers. The urgency index, adapted from Covey et al.'s Time Management Matrix, provides a quantitative measure of students' tendency to prioritize urgent over important tasks, identifying patterns such as urgency addiction that may contribute to stress and reduced productivity. The study's aim is to determine the urgency index among medical and dental students and identify the demographic, familial, and educational factors contributing to their urgency addiction.

Materials and Methods: This cross sectional study was conducted on 1st and final year MBBS and BDS students. The urgency index questionnaire was used to categorize students into low urgency index, high urgency index, and urgency addiction. Urgency index for each student was calculated and they were categorised as low urgency if the score is <25, high urgency if the score is 26-45 and urgency addiction if they scored >45. Associations with gender, year of study, maternal employment, background education (FSc vs. A levels), and program (MBBS vs. BDS) were analyzed using chi-square tests. Data was analysed by SPSS 29.

Results: Out of 306 students, 76.8% (n=235) were from MBBS, 57.5% (n=176) were females and from first year each. Of all, 12.7% (n=39) students had low urgency index, 49.7% (n=152) had a high urgency index, while 37.6% (n=115) had urgency addiction Urgency addiction was more in first-year students (44.9%; n = 79) than final-year students (p = 0.002) Females suffered significantly more level of urgency index 43.8%(n=77) than males.(p value 0.01). Students whose mothers were non-working also had higher urgency addiction rates (40.0% n=100) than those with working mothers (26.8% n=14; p=0.04).

Conclusion: Around half of participants had high urgency index. Urgency addiction was significantly more in females, 1st year students and students whose mothers were working ladies.

Key words: Medical student, Stress, Time management, Time Pressure

Introduction:

Time management is widely recognized as an essential skill for medical and dental students to balance demanding coursework, clinical responsibilities, and personal commitments. Ineffective time management can lead to missed deadlines, increased stress, reduced productivity, and ultimately impact academic success and career development.[1,2]

The urgency index, adapted from Covey et al.'s (1994) Time Management Matrix, offers a focused, quantitative way to assess students' tendency to prioritize urgent tasks over important, long-term goals.[3,4] Unlike broader tools, it highlights "urgency addiction": a reactive habit of responding impulsively to immediate demands, often at the expense of strategic planning and self-regulation.[3]

This index also helps identify whether students are achieving meaningful long-term goals or remain caught in short-term, reactive cycles. A high urgency index may suggest difficulties in emotional regulation, greater vulnerability to stress and burnout, and the influence of external pressures such as peer expectations.[3,5]

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Received: February 1,2025
Revised: February 27, 2025
Accepted: March 25, 2025
DOI: https://doi.org/10.52442/jrcd.v6i1.113

Urgency addiction is especially relevant in medical and dental education, where academic pressures and time-sensitive tasks can drive students toward urgency-focused behaviors.[5] Gender differences further play a role, with female students often showing higher urgency tendencies, possibly linked to greater social and personal expectations.[6]

Despite its practical value, few studies have used the urgency index as a standardized tool among medical and dental students. This limited use underscores the novelty of this study, which aims to explore how urgency-driven behaviors manifest and which demographic, familial, or educational factors influence them.

Despite the recognized importance of time management in medical education, there is limited empirical data exploring how urgency-driven behaviors (captured through the Urgency Index) manifest in this population and what demographic, familial, or educational factors may influence them. Identifying these patterns is important because persistent urgency addiction can contribute to burnout, stress, and reduced academic effectiveness. This knowledge of urgency scores can be used to guide interventions in improving time management and focus on long-term outcomes for medical and dental students. The students can recognize if they are overly reliant on the adrenaline rush that comes with handling urgent tasks, leading to a proactive change in their behavior. Furthermore, it can assist education providers with developing initiatives that help reduce burnouts and promote a better work-life balance, eventually improving the student's productivity and mental health.

Objectives

To determine the urgency index of medical and dental students and to identify demographic, familial, and educational factors (e.g., gender, year of study, basic education, parental profession) associated with urgency addiction.

Materials and Methods

This cross-sectional observational study was conducted at Rehman medical Institute, Peshawar. Ethical approval was taken from RMI-REC referenced RMC/CMPH-REC/Approval 25-02. Written informed consent was also taken from the study participants.

This cross-sectional observational study was conducted over a period of one month following the issuance of ethical approval. The study population included first-year and final-year students enrolled in the MBBS and BDS programs. All students actively enrolled in their first or final year were considered eligible for participation, while those detained in the same academic year were excluded from the study. All students in these academic years were invited to participate, using a consensus sampling technique, where every eligible student within the defined population is approached for inclusion. Different study groups were formed for analysis purpose.

- Group 1 (MBBS): further divided into first and final year sub-groups.
- Group 2 (BDS): further divided into fist and final year sub-groups.

After taking informed written consent, the students were asked to fill a proforma containing their demographics and urgency index questionnaire.

To assess urgency-oriented time-management behaviors among medical and dental students, we used the **Urgency Index questionnaire**, which was conceptually based on the Time Management Matrix described by Covey et al. (1994) in First Things First. It highlights a common behavioral pattern known as "urgency addiction"—a tendency to over-prioritize tasks that are urgent but not necessarily important, at the expense of long-term, meaningful goals.[3]

The Urgency Index questionnaire consists of 16 items scored on a 0–4 Likert scale (0 = never; 4 = always). Participants rate the frequency of behaviors reflecting urgency-driven patterns, such as feeling pressure to act immediately or frequently prioritizing urgent deadlines over important but non-urgent tasks. Total scores are calculated by summing individual item responses. Following the original scoring method, students are categorized into three groups:

- **0-25:** low urgency
- **26-45:** high urgency
- **>46:** urgency addiction

Urgency index for each student was calculated and they were categorised accordingly to the above score.

The data was entered in SPSS 29. Frequencies and percentages were calculated for quantitative variables, while the t-test and chi-square test were applied to the qualitative variables. Both groups and subgroups were compared for having low, high urgency index, and urgency addiction.

The frequency of urgency addiction was calculated and its association with gender, background education program (FSc Vs A levels) year of education, basic education program (MBBS or BDS), parental profession, were noted. A p value of less than 0.05 was considered statistically significant.

Results

A total of 306 students participated in the study, comprising 42.5% (n=130) males and 57.5% (n=176) females. Of these, 76.8% (n=235) were enrolled in MBBS and 23.2% (n=71) in BDS. Overall, 57.5% (n=176) were from first year and 42.5% (n=130) from final year.

Based on the urgency index, 12.7% (n=39) of students had a low urgency index, 49.7% (n=152) had a high urgency index, and 37.6% (n=115) were classified as having urgency addiction. Figure 1 describes urgency scores in gender, academic year and program.

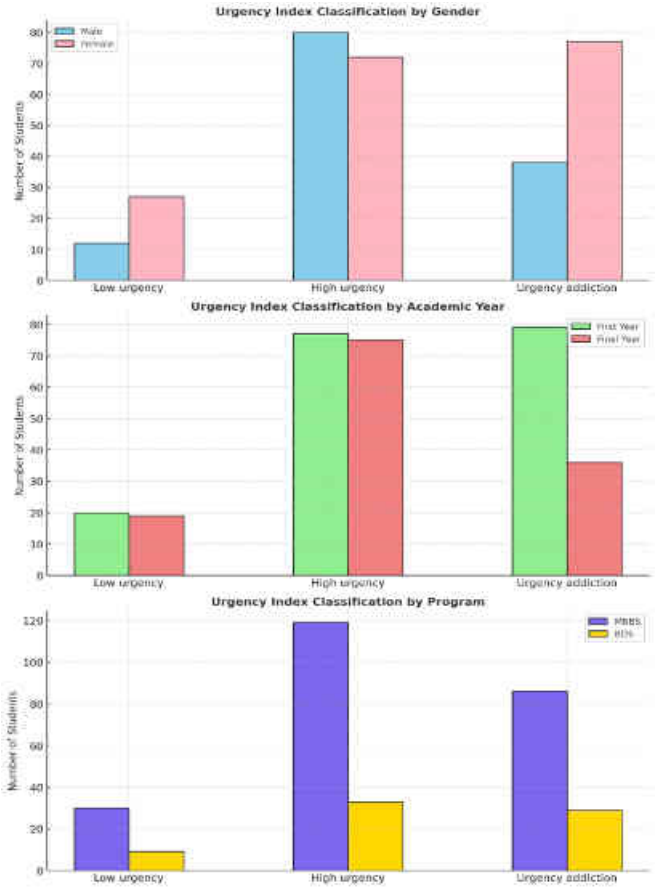

Figure 1: Distribution of Urgency Index Categories by Gender, Academic Year, and Program

Urgency addiction was significantly more prevalent among first-year students (**44.9%**, n=79) than final-year students (**27.7%**, n=36) (p=0.002). These findings suggest that urgency addiction is more prevalent among first-year students than final-year students, indicating that time management behaviors and urgency patterns may improve as student progress through the medical/dental curriculum.

Similarly, it was more common among female students (**43.8%**, n=77) compared to male students (**29.2%**, n=38) (p=0.010). This suggests female students may be more prone to urgency-driven time-management behaviors

Students whose mothers were non-working also had a higher prevalence of urgency addiction (**40.0%**, n=100) than those with working mothers (**26.8%**, n=15) (p=0.040). This may reflect differences in early time-management learning, where students with working mothers might develop stronger self-regulation due to greater household responsibilities and structured routines.

Urgency addiction was significantly more common among female students [43.8% (n=77)] than male students [29.2%

(n=38)] giving p value 0.010.

Other factors like academic program (MBBS vs. BDS), educational background (FSc vs. A Levels), residence status (hostelite vs. day scholar), and father's profession (doctor Vs non-doctor) showed no statistically significant association with urgency addiction.

Details of factors associated with urgency addiction are described in table 1.

Factors		Urgency addiction %(n)	P value
Academic year	1st year	44.9(79)	0.002
	Final year	27.7(36)	
Gender	Female	43.8(77)	0.01
	Male	29.2(38)	
Program	MBBS	36.6(86)	0.51
	BDS	40.8(29)	
Background educational status	FSC	38.1(104)	0.59
	A level	33.3(11)	
Residence	Hostelite	35.6(37)	0.26
	Day scholar	42.5(78)	
Father's profession	Doctor	36.1(73)	0.46
	Non doctor	40.4(42)	
Mother's profession	Working	26.8(15)	0.04
	Non-working	40(100)	

Table 1: Factors associated with urgency addiction

Discussion

Multiple factors contribute to the trait of urgency addiction in a person which further leads to poor time management and burnout. Prior research indicates that women typically experience burnout, problems balancing work and family life, and a greater sense of urgency than men. This is caused by a number of variables, including some risk factors associated with sex, such as unequal compensation, a lack of mentorship, limited leadership chances, time restrictions, increased childcare or household obligations, and mother age. Additionally, burnout appears to be triggered differently in men and women; for men, depersonalization is typically the major driver, but for women, emotional weariness is the key one [7].

Our study resonates with previous studies regarding more urgency addiction in first year versus final year students. According to earlier research, reason for this could be that first-year medical students experience more time management problems than other students. They lack proficiency in time management techniques such as setting priorities, breaking down work into manageable chunks, creating a time limit plan, eliminating unnecessary tasks, and planning ahead [8].

In our study, BDS students had a greater urgency addiction than mbbs students, in contrast to earlier studies where students of both programs have the same stress and time management problems [9]. The shift in organizational culture or faculty attributes could be one of the cause. Numerous research have looked into the connection between students' academic stress and their parents' employment position. Children of professionals frequently face increased pressure to perform well academically, especially in high-status occupations like medicine [10,11]. The effects aren't always obvious, though, and this pressure can show up as anxiety, perfectionism, and possibly urgent addiction-related behaviors (such as procrastination followed by frenzied last-minute activity). According to certain studies, professional children might also gain from stress-reduction tools and supportive surroundings [12]. Although it didn't directly test for urgency addiction, a study by lee et al. (2018) discovered that children of doctors reported higher levels of academic pressure than children of non-physicians [13].

Compared to children of non-working mothers, children of working mothers experience higher levels of stress. Our findings are consistent with earlier research from both domestic and foreign sources. Studies conducted in pakistan and around the world both lend credence to this theory[14, 15]. According to the study, there are notable differences between the problem-focused coping mechanisms utilized by children of working and non-working mothers. It has been discovered that children of non-working mothers put effort into identifying the issues, coming up with potential solutions, weighing the advantages and disadvantages of each option, and then acting on their decision.the study also shows that there are notable differences in the emotion-focused coping mechanisms utilized by children of working and non-working mothers. Children cannot reach working mothers; instead, they seek solace in avoiding the issue rather than facing it head-on. Children of working mothers employ emotion-focused coping mechanisms as a result of less mother-child interaction [14, 16]. Despite the aforementioned conclusions, some research also suggests that children of working mothers are better organized, disciplined, and have better time management skills because they have a positive role model in their lives [17]

Our findings resonates with earlier research, which also shows that day scholars are more likely than hostelite college students to face peer pressure and academic stress, as well as to set feasible goals rather than unachievable ones[18].

Our study reveals that fsc students have more stress related issiues as compared to a levels. One possible explanation for this discrepancy is that fsc students typically deal with more stress and deadline pressure, whilst a level students have a more flexible learning environment and choose a more conceptual approach to learning [19, 20]

Limitations

To obtain a comprehensive perspective, multicenter research would be advantageous. Second, our analysis may be biased due to differences in the sample sizes of MBBS and BDS as well as student years.

Conclusion

This study highlights that urgency addiction is relatively common among medical and dental students, affecting over a third of participants. The prevalence was significantly higher among first-year students, female students, and those whose mothers were non-working, suggesting that both demographic and family factors may influence urgency-driven time management behaviors. These findings underline the need for targeted interventions and structured time-management training, particularly early in the medical and dental curriculum, to help students adopt more proactive and balanced approaches to managing academic demands.

CONFLICT OF INTEREST: None
FUNDING SOURCES: None

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How to cite this article?

Qayyum W, Akbar Z, Ashraf S, Shaheen Z, Khan M. Time management and urgency index of medical and dental students and factors associated with urgency addiction. Rehman Coll. Dent (2025); 6(2). 23-26

Author Contributions

1. Wajeeha Qayyum : Conception and study design, analysis, and interpretation of data, drafting the manuscript.
2. Zaineb Akbar : Conception and study design, critical review.
3. Seema Ashraf : Acquisition and drafting of data, drafting the manuscript.
4. Zakia Shaheen : Analysis and interpretation of data, critical reveiw.
5. Maham Khan: Drafting the manuscript, critical review, approval of final version to be published.