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Original Article

Academic Burnout among Healthcare Services Management Students and its Contributing Factors: A Cross-sectional Study from Iran

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Abstract

Introduction: Academic burnout (AB) poses a serious challenge for university students, particularly those in demanding disciplines such as Healthcare Services Management (HSM). The study aims to explore AB and its contributing factors among HSM students, ultimately providing insights that inform strategies to mitigate this issue and improve educational outcomes in this critical field.

Methods: This cross-sectional study targeted 118 HSM students at Shiraz University of Medical Sciences (SUMS), who were invited to fill out a 22-item questionnaire comprising six demographic items and 15 items from the Maslach Burnout Inventory (MBI). Data were collected using the census method and analyzed with SPSS software (version 26). Descriptive statistics of AB and its dimensions were provided. Also, Kruskal-Wallis and Mann-Whitney U tests were used for the bivariate analysis, with a significance level set at P value< 0.05.

Results: Overall, 118 HSM students with a mean age of 22.56± 3.66 years participated in this study. The total mean score for AB was greater among BSc students than in those pursuing other educational levels, and it was also higher in 2020 and 2021 compared to 2019 and 2022. The students demonstrated a moderate level of AB. Significant associations were observed between AB scores and factors such as employment status, being local to the university location, and year of enrollment.

Conclusion: The results indicated that HSM students exhibited a moderate level of AB. Therefore, policymakers are strongly encouraged to implement immediate interventions such as access to academic counseling, time management workshops, peer support programs, and flexible course scheduling to provide a supportive educational environment for these students.

Keywords: Academic Burnout, Factors, Healthcare Services Management, Students

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Introduction

Academic burnout (AB) has emerged as a significant issue, impacting students across various disciplines (1). This phenomenon negatively impacts their performance and well-being, resulting in lower learning outcomes, higher dropout rates, wasted resources, and various challenges within the educational system (1).

AB is defined as a chronic state of physical, emotional, and mental exhaustion caused by extended exposure to stress and pressure in an academic setting (1). It encompasses three key dimensions: emotional exhaustion, characterized by feelings of depletion; emotional indifference (cynicism), marked by detachment and negativity; and emotional inefficiency, reflecting a sense of reduced effectiveness in academic tasks (1). Students experiencing this condition may feel physically and emotionally depleted, resulting in diminished academic performance and heightened irritability (2-5). Additional symptoms

include reduced creativity, frequent illnesses, and feelings of anxiety or depression (2-5).

Beyond its negative impact during the educational phase, AB also has long-term consequences. Research indicates that students who experience burnout while studying are likely less effective in their future job responsibilities and have a higher likelihood of leaving their positions after employment (6-10).

The evidence suggests that several factors contribute to AB, including prolonged stress from heavy workloads, a lack of support, unrealistic expectations, and inadequate coping mechanisms (11). In addition to these well-known causes, environmental factors such as overcrowded classrooms, poor physical learning conditions, competitive and high-pressure academic atmospheres, and lack of institutional support can intensify the experience of burnout. Personal factors like perfectionism, low self-esteem, financial concerns, family responsibilities, and poor time management also play a crucial role in increasing vulnerability to burnout (12, 13). Environmental pressures, such as competitive academic environments and personal life challenges, can intensify these feelings (11). When it comes to the students in Healthcare Services Management (HSM), addressing AB is particularly critical, as this field plays a pivotal role in shaping the future of a country's healthcare system. Focusing on Healthcare Services Management (HSM) students is particularly important because they face a unique combination of academic and practical stressors. In addition to demanding health and management sciences coursework, HSM students are often required to understand complex organizational systems, analyze healthcare policies, and participate in fieldwork or internships, which can intensify pressure. Furthermore, future healthcare managers may feel additional responsibility due to the societal importance of their future roles, which can increase stress and anxiety compared to students in other fields(14, 15). Given the key role of graduates of this field in managing the country's health system, preventing and managing their academic burnout is essential not only for individual health but also for the sustainability and quality of the health system.

Therefore, addressing AB in this group is not only a matter of academic well-being but also crucial for the sustainability of healthcare systems that depend on qualified, resilient professionals.

It is important to assess burnout among students in this field and develop targeted interventional programs to manage it.

Without such initiatives, heightened stress levels could hinder their ability to acquire the necessary skills and knowledge for effective healthcare management in their future careers, potentially resulting in serious negative consequences for the healthcare system in the country due to a lack of qualified professionals. Therefore, this research aimed to investigate AB and the factors that contribute to it among all HSM students at Shiraz University of Medical Sciences (SUMS).

We hypothesized that academic burnout is influenced by demographic and educational factors such as employment status, year of enrollment, and educational level.

Methods

Setting and Participants

This cross-sectional study employed the census method for data collection, conducted among students studying Health Services Management at Shiraz University of Medical Sciences (N=118) between December 2022 and February 2023. Inclusion criteria were all students enrolled in the HSM program between 2019 and 2022. There were no exclusion criteria, as all invited students agreed to participate. Since a census method was employed, all eligible students were included without prior sample size calculation. First, the researchers obtained a contact list from SUMS, and they used to call HSM students and explain the study's objectives. Everyone invited to participate in the study agreed to participate, resulting in no exclusions. While the census aimed to include the entire population of interest, it inherently lacked random sampling. It may have introduced selection bias, as it only included students who were reachable and willing to participate, and the response rate in this study was 100%. To reduce social desirability bias, anonymity was ensured, and no identifying information was collected. Therefore, the results should be interpreted with caution, acknowledging the potential impact of voluntary participation on the generalizability of the findings.

Data Collection

The data collection tool in this study was a 22-item questionnaire including seven demographic

characteristics (age, gender, marital status, employment status, educational level, being a local of university location, and year of enrollment) and the 15-item Maslach Burnout Inventory (MBI) (16). Our study utilized a valid and reliable Farsi translation of the MBI questionnaire, with Cronbach's alpha coefficients for the first, second, and third dimensions calculated at 0.88, 0.90, and 0.84, respectively, indicating good internal consistency (16). Additionally, the reliability of the translated questionnaire was re-evaluated in this study, yielding a Cronbach's alpha of 79.7%. Questionnaires were administered via [online platform/email/in-person], and responses were collected anonymously. The MBI questionnaire consists of 15 items in three dimensions: emotional exhaustion (items 1-5), emotional indifference (items 6-9), and emotional inefficiency (items 10-15). The MBI questionnaire was scored using a seven-point Likert scale (1: Never; 2: Rarely; 3: Sometimes; 4: Neutral; 5: Often; 6: Very often; 7: Always). Each question's minimum and maximum scores are 1 and 7, respectively. Moreover, the interpretation of the total AB score is as follows: a score of 15 to<45 indicates low AB, a score of 45 to<75 moderate AB, and a score of 75 to 105 indicates high AB.

Data Analysis

This study analyzed the data using IBM SPSS Statistics software (version 25). Descriptive statistics regarding AB and its dimensions are shown in Table 1. The Shapiro-Wilk test for normality yielded a significance value of less than 0.05, indicating that non-parametric statistical tests were required for data analysis. Accordingly, bivariate analysis was performed using the Kruskal-Wallis and Mann-Whitney U tests. Tests were two-sided, and a *P*-value less than 0.05 was considered statistically significant. Furthermore, two graphs and tables were used to compare the mean scores of students' AB in each dimension, as well as the total score, based on their levels of education and years of enrollment.

Ethical Considerations

The proposal for this study was approved by the Ethics Committee affiliated with SUMS, Shiraz, Iran, with the ethics code of IR.SUMS. NUMIMMG.REC.1402.110. Additionally, the Declaration of Helsinki principles were carefully adhered to, including using an anonymous questionnaire, ensuring researcher accessibility, and maintaining privacy and confidentiality (11).

Furthermore, voluntary participation was emphasized by inquiring about the participants' willingness to participate in the study, and written informed consent was obtained from each individual. Participants were also assured that they could withdraw from the study at any time without providing any justification. This study received no external funding.

Results

118 HSM students with a mean age of 22.56 (SD=3.66) years participated in this study. According to their demographic information, 26 (22%) were male, 97 (82.2%) were single, 5 (4.2%) were employed, and 44 (37.3%) were local to the university location. Furthermore, 74 (62.7%),

Table 1: Demographic Characteristics of the Participants (n=118)

Variable	Category	n%	Mean±SD (where applicable)
Age(years)	-	-	22.56±3.66
Gender	Male	26(22%)	
	Female	92(78%)	
Marital status	Single	97(82.2%)	
	Married	21(17.8%)	
Employment Status	Employed	5(4.2%)	
	Unemployed	113(95.8%)	
Local to University	Yes	44(37.3%)	
	No	74(62.7%)	
Educational Level	BSc	74(62.7%)	
	MSc	40(33.9%)	
	PhD	4(3.4%)	
Year of Enrollment	2019	7(5.9%)	
	2020	26(22%)	
	2021	42(35.6%)	
	2022	43(36.4%)	

40 (33.9%), and 4 (3.4%) were enrolled in BSc, MSc, and PhD programs, respectively. Regarding the year of enrollment, 7 (5.9%), 26 (22%), 42 (35.6%), and 43 (36.4%) of the students joined SUMS in 2019, 2020, 2021, and 2022, respectively.

It is important to note that due to the study's cross-sectional nature, the results presented reflect **correlations** rather than causal relationships between demographic and academic variables and burnout dimensions. Table 1 presents the demographic characteristics of the participants.

The responses from participants regarding this questionnaire are outlined below and presented in Table 2.

To address the second research question, the following graph and table compare the mean scores of students' AB in each dimension and the total score according to the student's educational levels. Among the participants, students in the bachelor's degree program exhibited the highest total mean AB score, followed by those in the PhD and MSc programs. Furthermore, across all three dimensions of AB, the mean score for the third dimension surpassed that of the other two at every educational level. Notably, the total mean AB score for all students, regardless of their education level, ranged from 45 to 75, reflecting a moderate level of AB (Table 3).

Table 2: Participants' responses to the Maslach et al.'s AB questionnaire (n = 118)

Question number	Question	Never N (%)	Rarely N (%)	Sometimes N (%)	Neutral N (%)	Often N (%)	Very often N (%)	Always N (%)
Emotional exhaustion								
Q1	I am exhausted due to the activities related to education.	39 (33.1)	2 (1.7)	7 (5.9)	61 (51.7)	2 (1.7)	2 (1.7)	5 (4.2)
Q2	Since enrolling in the university, I have lost interest in the courses.	13 (11)	38 (32.2)	34 (28.8)	28 (23.7)	2 (1.7)	3 (2.5)	0 (0)
Q3	I can solve problems that arise in study-related activities.	2 (1.7)	21 (17.8)	14 (11.9)	4 (3.4)	47 (39.8)	29 (24.6)	1 (0.8)
Q4	I feel tired at the end of a school day at my school.	2 (1.7)	30 (25.4)	13 (11)	42 (35.6)	9 (7.6)	3 (2.5)	19 (16.1)
Q5	My enthusiasm for lessons has decreased.	12 (10.2)	26 (22)	24 (20.3)	38 (32.2)	14 (11.9)	0 (0)	4 (3.4)
Emotional indifference								
Q6	I have made an effective contribution to the classes I attend.	6 (5.1)	16 (13.6)	3 (2.5)	36 (30.5)	43 (36.4)	2 (1.7)	12 (10.2)
Q7	Studying or attending class makes me feel exhausted.	4 (3.4)	35 (29.7)	25 (21.2)	32 (27.1)	9 (7.6)	8 (6.8)	5 (4.2)
Q8	I am a good student.	0 (0)	18 (15.3)	4 (3.4)	25 (21.2)	11 (9.3)	17 (14.4)	43 (36.4)
Q9	I have learned many interesting things in the course of studying my lessons.	0 (0)	17 (14.4)	10 (8.5)	29 (24.6)	37 (31.4)	12 (10.2)	13 (11)
Emotional inefficiency								
Q10	When I wake up in the morning and have to spend another day at my place of study, I feel bored and tired.	3 (2.5)	24 (20.3)	21 (17.8)	32 (27.1)	32 (27.1)	0 (0)	6 (5.1)
Q11	I have become very pessimistic about my lessons' usefulness and potential benefits.	18 (15.3)	14 (11.9)	12 (10.2)	19 (16.1)	16 (13.6)	25 (21.2)	14 (11.9)
Q12	When I achieve my academic goals, I feel excited.	0 (0)	12 (10.2)	26 (22)	11 (9.3)	13 (11)	26 (22)	30 (25.4)
Q13	Studying or attending class puts pressure on me.	10 (8.5)	24 (20.3)	34 (28.8)	29 (24.6)	15 (12.7)	0 (0)	6 (5)
Q14	I have doubts about the importance of my lessons.	9 (7.6)	3 (2.5)	52 (44.1)	35 (29.7)	13 (11)	0 (0)	6 (5.1)
Q15	I am effective in doing the activities in the class.	0 (0)	19 (16.1)	16 (13.6)	30 (25.4)	26 (22)	3 (2.5)	24 (20.3)

Table 3: The AB Scores and Its Dimensions by the student's level of education

Level of education	Emotional exhaustion Mean±SD	Emotional indifference Mean±SD	Emotional inefficiency Mean±SD	Total AB Mean±SD
BSc	17.82±5.78	17.68±4.23	24.47±6.11	59.91±11.97
MSc	16.95±4.85	16.65±4.72	23.45±5.21	57.05±12.31
PhD	17.0±3.16	16.50±5.19	24.75±4.27	58.25±12.25
All	17.50±5.40	17.29±4.42	24.13±5.73	58.88±12.7

A similar graph and table were also created to address the third research question. These display a comparison of students' AB mean scores across each dimension and, in total, based on their year of enrollment. Accordingly, students who enrolled in 2020 and 2021 obtained the highest AB scores. However, the total mean AB scores across all years fell within a moderate range, specifically between 45 and 75. Additionally, for all years of enrollment, the mean score of the third dimension exceeded that of the other two dimensions (Table 4).

According to Table 5, marital status, employment status, being local to the university location, and the year of enrollment showed a significant association with the score of emotional exhaustion (first dimension) (P<0.05). Moreover, gender, being local to the university location, and the year of enrollment were significantly associated with the score of emotional indifference (second dimension) (P<0.05). Furthermore, marital status, employment status,

Table 4: The AB Scores and its Dimensions by the Year of Enrollment (2019-2022)

Year of Enrollment	Emotional exhaustion Mean±SD	Emotional indifference Mean±SD	Emotional inefficiency Mean±SD	Total AB Mean±SD
2019	13.85±5.24	16.42±3.73	26.28±7.76	56.57±9.91
2020	17.42±6.84	20.23±5.28	24.00±7.71	61.52±14.51
2021	20.07±5.01	16.66±4.68	26.33±4.70	63.07±12.75
2022	15.62±3.53	16.27±2.74	21.72±3.94	53.62±7.56
All the above years	17.50±5.40	17.29±4.42	24.13±5.73	58.88±12.7

Table 5: Univariable analysis of demographic determinants of AB and its dimensions

Demographic variables	AB dimensions						Total AB	
	Emotional exhaustion		Emotional indifference		Emotional inefficiency			
	Mean±SD	P value	Mean±SD	P value	Mean±SD	P value	Mean±SD	P value
Age		0.620†		0.805†		0.892†		0.911†
<25	17.33±5.68		17.36±4.46		24.18±5.83		58.82±12.07	
>25	18.07±4.31		17.03±4.34		23.96±5.56		59.07±12.31	
Gender		0.236¶		0.012¶		0.377¶		0.079¶
Female	17.15±5.42		16.79±4.61		23.82±5.80		57.69±11.90	
Male	18.73±5.21		19.07±3.12		25.23±5.55		63.03±11.96	
Marital status		0.035¶		0.085¶		0.008¶		0.104¶
Single	17.28±5.86		17.06±4.57		23.56±5.94		57.84±12.46	
Married	18.47±2.08		18.38±3.52		26.76±3.92		63.61±8.85	
Employment status		0.001¶		0.409¶		0.040¶		**0.026¶**
Employed	24.40±4.33		18.20±6.72		32.00±8.48		74.60±19.30	
Unemployed	17.10±5.11		17.25±4.33		23.78±5.39		58.08±11.14	
Being a local of the university location		0.000¶		0.007¶		0.000¶		**0.000¶**
Yes	14.95±3.36		15.90±4.97		20.45±4.89		51.31±9.28	
No	19.01±5.82		18.12±3.86		26.35±5.07		63.43±11.28	
Education Level		0.724†		0.712†		0.552†		0.425†
BSc	17.82±5.78		17.68±4.23		24.47±6.11		59.91±11.97	
MSc	16.95±4.85		16.65±4.72		23.45±5.21		57.05±12.31	
PhD	17.00±3.16		16.50±5.19		24.75±4.27		58.25±12.25	
Year of enrolment		0.003†		0.000†		0.004†		**0.001†**
2019	13.85±5.24		16.42±3.73		26.28±7.76		56.57±9.91	
2020	17.42±6.84		20.23±5.28		24.00±7.71		61.52±14.51	
2021	20.07±5.01		16.66±4.68		26.33±4.70		63.07±12.75	
2022	15.62±3.53		16.27±2.74		21.72±3.94		53.62±7.65	

† Kruskal-Wallis test; ¶ Mann-Whitney test; Significant values (P value < 0.05) are in **bol**d.

Table 6: Ordinal Logistic Regression Analysis of Factors Associated with Academic Burnout among HSM Students (n=118)

Variable	Odds ratio (OD)	Confidence interval 95%	P value
Employment Status	2.31	1.10-4.58	**0.02**
Local Status	1.78	1.15-2.74	**0.01**
Year of Enrollment)	2.54	1.21-5.33	**0.01**
Gender	1.12	0.56-1.93	0.68
Marital Status	1.05	0.58-1.89	0.87
Educational Level	1.41	0.82-2.41	0.21

Significant values (P value < 0.05) are in **bold**.

being local to the university location, and the year of enrollment were significantly associated with the score of emotional inefficiency (third dimension) (P<0.05). Finally, employment status, being local to the university location, and the year of enrollment demonstrated a significant association with the total mean score of AB (P<0.05). Based on post-hoc tests, a significant difference was observed between students entering 2020 and 2021 and those entering 2019 and 2022 (P<0.05).

According to Table 6, an ordinal logistic regression analysis was conducted to examine the independent predictors of academic burnout further. Variables that showed significant associations in bivariate analyses (employment status, being local to the university location, and year of enrollment) were included in the model. The results indicated that employment status (OR=2.31, 95% CI: 1.10–4.85, P=0.027), being non-local (OR=1.78, 95% CI: 1.15–2.74, P=0.012), and enrolling in 2020–2021 (OR=2.54, 95% CI: 1.21–5.33, p=0.014) were independently associated with higher odds of academic burnout. These findings suggest that personal and contextual factors contribute to burnout risk among HSM students.

Discussion

Our results demonstrated that BSc students scored higher in academic burnout than in MSc and PhD programs. This may be attributed to several factors, including heavier course loads, less experience in managing academic stress, and greater exposure to foundational coursework that is often perceived as more demanding. Furthermore, the elevated AB scores observed in the years 2020 and 2021, compared to 2019 and 2022, likely reflect the impact of the COVID-19 pandemic. The abrupt transition to virtual learning reduced social interactions, and uncertainty about academic progression during the pandemic have increased university students' stress and burnout (see Aristovnik et al., 2020; Son et al., 2020). These findings are consistent with previous studies that reported heightened academic burnout during educational disruption. Furthermore, the findings indicate significant associations between AB scores and factors such as employment status, being local to the university location, and the year of enrollment. It is important to emphasize that these findings are correlational due to the study's cross-sectional design, and therefore, causal inferences should be avoided (12, 17-19).

Academic burnout is prevalent among students pursuing degrees in healthcare-related fields such as Health Services Management (HSM) (20). The demanding nature of these programs and the pressures to perform academically and prepare for future careers are commonly associated with increased stress and exhaustion (21). Without sufficient support systems and resources, students may be more vulnerable to burnout, which is linked to adverse academic and psychological outcomes (22). However, due to the design of this study, these relationships should be interpreted as associations rather than causations.

Our findings indicate that HSM students demonstrate a moderate level of AB, which is consistent with a recent study by Aghaei et al. reporting a mean score of 57.85±10.34 among Health Sciences students across several universities in Iran (23). In contrast, a 2016 Lorestan University of Medical Sciences study reported lower AB levels (24). Recent studies have shown that the economic challenges stemming from international sanctions may significantly influence a higher level of AB. These sanctions have increased financial strain on students by reducing national economic capacity, limiting job opportunities, and increasing the cost of living. As a result, students may face greater anxiety about their academic future and financial security, which can, in turn, contribute to higher levels of academic stress and burnout. Additionally, the reduced availability of institutional resources and

support systems during economic hardship may exacerbate these effects (25, 26). This situation underscores the need for more supportive measures within educational institutions to help mitigate these effects and promote student well-being amidst challenging economic conditions.

According to our results, BSc students reported higher AB levels than those in other academic programs. This finding aligns with prior studies suggesting that undergraduate students may experience greater levels of psychological strain, including burnout, than graduate students (24). For example, a 2023 study from India identified significant differences in disengagement levels between undergraduate and postgraduate students, though differences in exhaustion were not statistically significant (27). These differences may be associated with academic transition challenges, workload intensity, social pressures, and reduced institutional support perceived by undergraduate students (28-30). Again, while these associations are noteworthy, causal interpretations should be avoided.

We observed a significant association between AB levels and the year of enrollment. Students who began their programs in 2020 and 2021 reported higher AB levels than those who enrolled in 2019 and 2022. This pattern aligns with literature highlighting the adverse psychological effects of the COVID-19 pandemic on students (31). Specifically, those who enrolled during the pandemic faced heightened stress due to the sudden shift to online learning, social isolation, and uncertainty about their education and future (31-33). Although these contextual factors may explain the pattern observed, the cross-sectional nature of our study prevents us from drawing causal conclusions.

Our findings suggest a significant association between AB and students' employment status. This result supports previous literature indicating that working students may experience higher burnout levels than their non-working peers (34, 35). Possible explanations include increased workload, time management challenges, and financial stress. However, as with other findings, this relationship should be interpreted cautiously and not assumed to be causative.

In addition, students' AB levels were significantly associated with being local or non-local to the university location. Similar findings have been reported in earlier research, suggesting that local students may benefit from environmental familiarity and social support networks, potentially resulting in lower AB (36). Nonetheless, these are potential contributing factors and should not be considered definitive causes.

Ouranalysis revealed no significant association between AB levels and age, gender, or marital status. These results are partially consistent with previous studies. For instance, Zheng et al. found that older students may experience greater AB, possibly due to balancing multiple responsibilities (37). Regarding gender, some studies suggest that males may report higher overall burnout, while females may experience greater emotional exhaustion, although these differences are often non-significant (37, 38). Conversely, female students may experience heightened emotional exhaustion and AB, potentially influenced by societal expectations and the availability of support systems (39).

The evidence on marital status remains mixed. At the same time, some studies report that married students show lower burnout due to enhanced motivation and support (40). In contrast, others, such as Malakian et al., found no such association among medical interns (41). Our results contribute to this ongoing discussion, underscoring the variability of these relationships across different contexts.

Lastly, while some studies have emphasized the role of educational level in predicting AB, our univariable analysis did not show a statistically significant association. This discrepancy further highlights the complexity of burnout and the influence of multiple potentially interacting factors.

Given the cross-sectional design of our study, it is essential to interpret all associations with caution. Longitudinal or experimental studies are needed to explore potential causal mechanisms and understand how these variables interact over time.

In addition to comparison with previous studies, our results indicate that individual and environmental factors specific to HSM students at Shiraz University of Medical Sciences also play an important role in academic burnout, which should be considered in educational planning.

Also, it is important to interpret these findings in the context of the unique academic and psychosocial challenges HSM students face. The association between employment and higher

burnout may stem from role conflict and time constraints. At the same time, non-local students may experience additional stress due to separation from family and adaptation to a new environment. The pronounced effect of the pandemic highlights the need for targeted interventions during periods of crisis, such as enhanced academic counseling and flexible learning arrangements. These insights underscore the importance of addressing structural and individual factors in mitigating academic burnout.

Limitations and Recommendations

As a limitation, this study included only 118 participants. Consequently, generalizing the findings to a larger population of HSM students may be challenging. Additionally, since a census method was utilized instead of random sampling, there may be a risk of selection bias. This is because it might only include students willing or available to participate, potentially distorting the results. However, we had to choose this method as our target population was small.

As a recommendation, future research should explore all possible confounding variables that affect the AB, including personal stressors, financial challenges, and external support systems. Furthermore, conducting a longitudinal study on this topic would provide insights into the dynamics of AB among students, allow for tracking changes in burnout levels over time, and assess the effectiveness of interventions on these levels.

Conclusion

The present study highlighted that healthcare services management (HSM) students in Shiraz, Iran, experience moderate academic burnout. To address the specific academic pressures faced by this population, educational institutions should implement tailored interventions. These may include flexible course scheduling to reduce overload, mentorship programs connecting students with senior peers or professionals, and curriculum adjustments to distribute the workload more evenly. Establishing and enhancing mental health support services designed explicitly for HSM students, offering structured stress management and resilience workshops relevant to healthcare management contexts, and providing career counseling tailored to their professional trajectory are also recommended.

Additionally, promoting a supportive academic culture through faculty development programs focused on empathy and student engagement and fostering student peer-support groups can help create a more inclusive environment. Continuous monitoring of student well-being and regular assessments of academic stressors should be used to identify early signs of burnout.

Given the study's cross-sectional design, no causal inferences can be made. Thus, future longitudinal studies are recommended to evaluate the long-term impacts of academic burnout and assess the sustained effectiveness of the proposed interventions.

Based on identifying factors related to academic burnout, it is recommended that support programs tailored to students' needs, especially for undergraduate students and those entering in 2020 and 2021, be designed and implemented.

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Conflict of Interest

There are no conflicts of interest.

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