Research Article

The Relationship between Resilience and Academic Burnout among Nursing and Midwifery Students in Kermanshah, Iran

Maryam Janatolmakan,[1] Yousef Torabi,[2] Shahab Rezaeian ![ORCID],[1] Bahare Andayeshgar ![ORCID],[3] Amirabbas Dabiry,[2] and Alireza Khatony ![ORCID] [4,5]

[1]*Clinical Research Development Center, Imam Reza Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran*
[2]*Student Research Committee, Kermanshah University of Medical Sciences, Kermanshah, Iran*
[3]*School of Health, Kermanshah University of Medical Sciences, Kermanshah, Iran*
[4]*Social Development and Health Promotion Research Center, Health Institute, Kermanshah University of Medical Sciences, Kermanshah, Iran*
[5]*Infectious Diseases Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran*

Correspondence should be addressed to Alireza Khatony; akhatony@gmail.com

Background. Nursing and midwifery students have relatively high levels of academic burnout. One of the mechanisms to combat this issue is resilience. The results related to the association between academic burnout and resilience indicate a negative association, but various studies have reported different correlation coefficients. Therefore, the current study was aimed to investigate the association between resilience and academic burnout among nursing and midwifery students. *Methods*. A total of 240 nursing and midwifery students were recruited in this cross-sectional study using stratified random sampling. Data were collected by a demographic information questionnaire, the Connor–Davidson Resilience Scale (CD-RISC), and the Maslach Burnout Inventory-Student Survey (MBI-SS). Data were analyzed by SPSS-16 using t-test, ANOVA, Spearman's correlation coefficient, and linear regression analysis. *Results*. The mean scores of academic burnout for nursing and midwifery students were 41.4 ± 14.8 and 41.2 ± 12.3, respectively, but the difference was not statistically significant ($p = 0.368$). The mean scores of resilience for nursing and midwifery students were 58.1 ± 13.3 and 52.9 ± 13.9, respectively, which showed a statistically significant difference ($p = 0.004$). Resilience was significantly inversely correlated with academic burnout in nursing and midwifery students ($r = -0.04$, $p < 0.001$; $r = -0.39$, $p < 0.001$). Increased resilience in students decreased academic burnout ($p < 0.001$). *Conclusion*. Academic burnout was moderate in nursing and midwifery students, but resilience was relatively high. Given the negative correlation between resilience and academic burnout, it is necessary to strengthen resilience skills and reduce factors that cause academic burnout.

1. Introduction

Individuals working in any profession can be exposed to stress at the workplace. However, the nature of some occupations, including nursing and midwifery, requires that their employees be more exposed to job stress [1–6]. The teaching/learning process, especially in the fields of nursing and midwifery, is a stressful experience. In addition to academic stress, students in these fields face various stressors such as observing patient death, fear of making mistakes at the patient's bedside, dealing with various infectious diseases, and the need to learn various skills for different roles [7, 8].

Prolonged exposure to emotional and interpersonal stressors may cause emotional exhaustion, skepticism, and procrastination, all of which are referred to as educational burnout syndrome [9–15]. Evidence suggests that nursing and midwifery students have relatively high levels of burnout [5–7, 16]. In this regard, Aghajani et al., Behrozi et al., and

Marzooghi et al. reported that nursing students in Iran experience moderate to high levels of academic burnout [7, 16, 17]. Further, Eaves and Payne reported a high rate of academic burnout in midwifery students [8].

Academic burnout may lead to unprofessional performance, academic failure, and reduced life satisfaction. Given these consequences, coping with this dilemma is of crucial importance [8, 10, 12–14, 18–22]. One of the mechanisms to combat academic burnout is resilience [10, 23–25]. Resilience can be defined as the ability to overcome difficulties and turmoil and become stronger in the face of unpleasant experiences [26, 27]. Resilience can protect people against stressors and lead to success in work and life [11, 26].

Various studies have investigated the association between academic burnout and resilience. Some other studies have shown a moderate to high rate of academic burnout [28, 29]. In terms of resilience, some studies have indicated high levels of resilience [10, 24, 30, 31], and some have reported low levels [32]. The results related to the association between academic burnout and resilience in nursing and midwifery students indicate a negative and significant association, but various studies have reported different correlation coefficients [10, 29, 33–42].

Given the severe consequences of academic burnout and nursing and midwifery students' lack of knowledge about academic burnout and resilience, the current study was aimed to investigate the association between resilience and academic burnout and compare nursing with midwifery students. This study sought to answer the following questions: (1) what is the rate of resilience and academic burnout in nursing and midwifery students? and (2) what is the relationship between resilience and academic burnout in nursing and midwifery students?

2. Materials and Methods

2.1. Study Design. This cross-sectional study was conducted at Kermanshah University of Medical Sciences (KUMS) from September to December 2018.

2.2. Sample and Sampling Method. The study population included all nursing and midwifery students of KUMS in 2019. According to the results of the study conducted by Kamalpour et al. [34] and using the correlational sample size formula, with 95% confidence interval and 80% study power, the sample size was calculated to be 120 subjects. Since both nursing and midwifery students were recruited, a total of 240 participants were selected. The inclusion criteria were willingness to participate in the study, being a nursing or midwifery student, having at least one academic year, no history of psychiatric illness (according to participants' self-report), not being in the examination period, not using psychiatric drugs (according to participants' self-report), and not having thyroid (according to participants' self-report). In this study, there were no missing data, and the response rate was 100%.

2.3. Study Instruments. Data were collected using a demographic information form, the Connor–Davidson Resilience

A total of 240 nursing and midwifery students were selected using the systematic sampling technique

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The objectives of the study were explained to the students, and if they agreed, the questionnaires were given to them

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Questionnaires were collected by the researchers after completion

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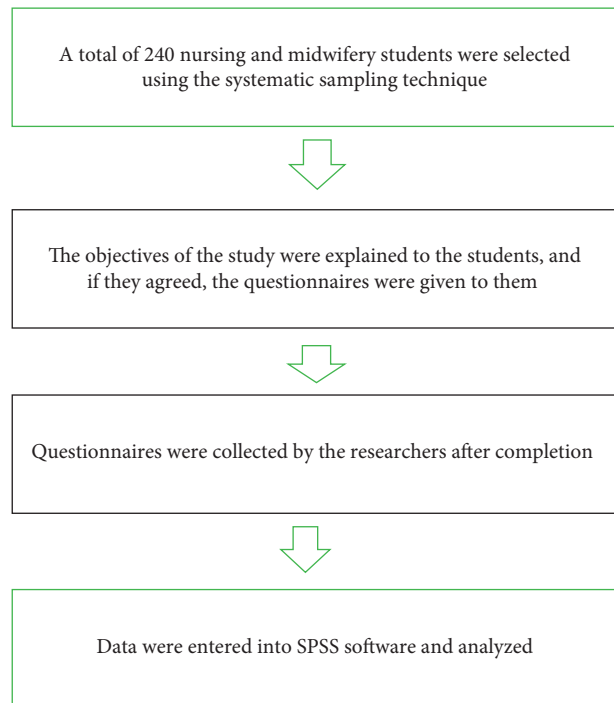Data were entered into SPSS software and analyzed

Figure 1: Study flow diagram.

Scale (CD-RISC), and the Maslach Burnout Inventory-Student Survey (MBI-SS). The demographic information form included five questions about the field of study, age, gender, semester, and residence. The CD-RISC was used to measure resilience [43]. Various studies have investigated the validity and reliability of these tools. Ramirez-Granizo et al. reported Cronbach's alpha of 0.86 for this tool [24].

The Persian version of CD-RISC has been psychometrically evaluated in Iran, with Cronbach's alpha levels of 0.87 and 0.89 [25, 26]. Mohammadi et al. reported Cronbach's alpha level of 0.89 [22]. In the present study, the internal consistency of CD-RISC was evaluated and confirmed with Cronbach's alpha of 0.85. The CD-RISC contains 25 questions and 4 subscales: achievement motivation (items 13, 14, 15, 19, and 25), self-confidence (items 3, 5, 10, 12, 16, 17, 20, 22, and 23), tenacity (items 4, 6, 18, and 21), and adaptability (items 1, 2, 7, 8, 9, 11, and 24). A 5-point Likert scale is used to answer the questions: "not true at all" (0), "rarely true" (1), "sometimes true" (2), "often true" (3), and "almost always true" (4). The level of resilience is equal to the sum of the scores of all items. The total score ranges from 0 to 100. A score range of 0 to 50 is equivalent to "low resilience" and a score range of 51 to 100 is equivalent to "high resilience."

The MBI-SS, developed by Maslach and Jackson, was used to measure academic burnout [18]. The validity and reliability of this tool have been confirmed in previous studies. Yavuz et al. examined the internal consistency of the instrument using Cronbach's alpha, and the alpha coefficients for the exhaustion, cynicism, and reduced efficacy subscales were 0.838, 0.844, and 0.875, respectively [15, 20]. The Persian version of MBI-SS has also been psychometrically evaluated in Iran, with alpha coefficients of 0.89, 0.84, and 0.67 for exhaustion, cynicism, and reduced efficacy

subscales, respectively [19]. In the current study, the internal consistency of MBI-SS was evaluated and confirmed by Cronbach's alpha. The alpha coefficients for the exhaustion, cynicism, and reduced efficacy subscales were 0.85, 0.80, and 0.70, respectively. The MBI-SS contains 15 questions, including questions 1–5, 6–9, and 10–15, which are related to exhaustion, cynicism, and reduced efficacy subscales, respectively. Questions 10–15 score in reverse. A 7-point Likert scale is used to answer the questions: "never" (0), "very rarely" (1), "rarely" (2), "sometimes" (3), "often" (4), "more often" (5), and "always" (6). To determine the level of academic burnout, the scores of all items were added. The total score ranges of 0–30, 31–60, and 61–90 indicate mild, moderate, and severe burnout, respectively.

2.4. Data Collection Method. After obtaining the approval of the ethics committee, the list of nursing and midwifery students was obtained from the school of nursing and midwifery. A total of 240 students were selected using the systematic sampling technique. Then, based on the students' class schedule, the researcher referred to their classes to explain the study objectives to them, and if they agreed, the questionnaires were given to them to complete. To increase the accuracy of the study, the students were provided with sufficient time to fill out the questionnaires (Figure 1).

2.5. Statistical Analysis. SPSS-16 software was used to analyze and describe the data. Initially, the Kolmogorov–Smirnov test was used to check the normality of quantitative variables (i.e., age, resilience, burnout, and their components). The results showed a normal distribution for age, components of resilience, and burnout. The independent t-test was used to compare normal quantitative variables (i.e., resilience, burnout, and emotional exhaustion components) in nursing and midwifery students. The chi-square test was used to compare nominal qualitative variables (gender and occupation) in the two groups. The independent t-test was used to compare resilience and academic burnout between men and women as well as between students who were living in the dormitory and those who were not living in the dormitory. ANOVA test was used to compare resilience and academic burnout in students with various age ranges and academic semesters. Spearman's correlation coefficient was used to assess the association between resilience and academic burnout. Linear regression was used to investigate the factors affecting academic burnout. The significance level was set at $p < 0.05$.

2.6. Ethical Considerations. The ethics committee of Kermanshah University of Medical Sciences confirmed the study. Written informed consent was obtained from all participants, and confidentiality of information was assured.

3. Results

The mean age of nursing students was 22.3 ± 2.6 years; 49.2% ($n = 59$) of them were female; and 42.5% ($n = 51$) lived in the

TABLE 1: Demographic characteristics of participants ($N = 240$).

Variables		Nursing	Midwifery
Age (mean ± SD)		22.3 ± 2.4	21.6 ± 1.7
Gender, n (%)	Male	61 (50.8)	—
	Female	59 (49.2)	120 (100.0)
Educational semester, n (%)	3 and 4	40 (33.3)	60 (50.0)
	5 and 6	40 (33.3)	30 (25.0)
	7 and 8	40 (33.3)	30 (25.0)
Residence, n (%)	Dormitory	51 (42.5)	68 (56.7)
	Nondormitory	69 (57.5)	52 (43.3)

dormitory. The mean age of midwifery students was 21.6 ± 1.7 years, and 56.67% ($n = 68$) of them were living in the dormitory (Table 1).

The mean scores of academic burnout for nursing and midwifery students were 41.4 ± 14.8 and 41.2 ± 12.3 (out of 90), respectively, which were not significantly different. For the academic burnout subscales (exhaustion, cynicism, and reduced efficacy), the mean scores for nursing students were 13.2 ± 7.2, 10.0 ± 6.5, and 18.2 ± 6.9, respectively. For midwifery students, the mean scores of exhaustion, cynicism, and reduced efficacy were 13.3 ± 5.7, 10.5 ± 5.6, and 17.4 ± 5.9, respectively. In terms of the academic burnout subscales, there was no significant association between nursing and midwifery students ($p < 0.05$).

According to the results, the mean resilience scores of nursing and midwifery students were 58.1 ± 13.3 and 52.9 ± 13.9 (out of 100), respectively, which was significantly different ($p = 0.004$). The mean scores of resilience subscales, including achievement motivation, self-confidence, tenacity, and adaptability, in nursing students were 11.7 ± 3.4, 20.0 ± 5.4, 9.3 ± 2.6, and 16.9 ± 4.0, respectively. The mean scores of achievement motivation, self-confidence, tenacity, and adaptability subscales in midwifery students were 10.6 ± 3.3, 18.7 ± 5.3, 7.9 ± 2.8, and 15.8 ± 4.2, respectively. In terms of resilience subscales, a significant association was observed between nursing and midwifery students ($p < 0.05$; Table 2).

The results showed a significantly inverse correlation between resilience and academic burnout in nursing ($r = -0.04$; $p < 0.001$) and midwifery ($r = -0.39$; $p < 0.001$) students (Table 3).

Moreover, students' increased resilience decreased the academic burnout ($F = 52.50$; $p < 0.001$; Table 4).

According to the multiple regression model, after adjusting the other variables (Table 5), the resilience, residence, and semester variables were significantly associated with burnout. Dormitory residents and students in the fifth and sixth semesters had significant burnout. Academic burnout decreased with an increase in resilience. However, no statistically significant relationship was found between the age and sex variables and academic burnout (Table 5).

4. Discussion

The current study was aimed to investigate the association between resilience and academic burnout in nursing and midwifery students. The results showed that nursing and

TABLE 2: Comparison of resilience and academic burnout in nursing and midwifery students.

	Variables	Nursing students (mean ± SD)	Midwifery students (mean ± SD)	p value
Resilience subscale	Achievement motivation	11.7 ± 3.4	10.6 ± 3.3	0.004
	Self-confidence	20.0 ± 5.4	18.7 ± 5.3	0.032
	Tenacity	9.3 ± 2.6	7.9 ± 2.8	<0.001
	Adaptability	16.9 ± 4.0	15.8 ± 4.2	0.028
	Resilience (total)	58.1 ± 13.3	52.9 ± 13.9	0.004
Burnout subscale	Cynicism	10.0 ± 6.5	10.5 ± 5.6	0.373
	Reduced efficacy	18.2 ± 6.9	17.4 ± 5.9	0.298
	Emotional fatigue	13.2 ± 7.2	13.3 ± 5.7	0.842
	Burnout (total)	41.4 ± 14.8	41.2 ± 12.3	0.368

TABLE 3: Relationship between dimensions of resilience and burnout among nursing and midwifery students.

		Dimensions of burnout					
		Cynicism		Reduced efficacy		Exhaustion	
Dimensions of resilience	Students	r	p value	r	p value	r	p value
Achievement motivation	Nursing	−0.13	0.142	−0.33	<0.001	−0.15	0.098
	Midwifery	−0.27	0.002	−0.29	0.001	−0.26	0.004
Self-confidence	Nursing	−0.28	0.002	−0.36	<0.001	−0.28	<0.001
	Midwifery	−0.21	0.021	−0.18	0.053	−0.22	0.018
Tenacity	Nursing	−0.41	<0.001	−0.28	0.002	−0.27	0.003
	Midwifery	−0.32	<0.001	−0.24	0.008	−0.33	<0.001
Adaptability	Nursing	−0.40	<0.001	−0.28	0.002	−0.30	0.001
	Midwifery	−0.33	<0.001	−0.31	<0.001	−0.33	<0.001

TABLE 4: The relationship between academic burnout and resilience.

Model	Unstandardized coefficients		Standardized coefficients	t	p value
	B	Standard error	Beta		
Constant	73.35	2.59	—	28.29	<0.001
Burnout	−0.432	0.06	−0.425	−7.24	<0.001
		$R = 0.42$; $R^2 = 0.18$			

TABLE 5: Factors related to academic burnout using the regression model.

Variables		B	SE	p value
Gender	Male	Ref.	—	—
	Female	1.79	2.3	0.454
Age	Continuous	0.01	0.4	0.978
Residence	Nondormitory	Ref.	—	—
	Dormitory	3.97	1.65	0.017
Semester	3 and 4	Ref.	—	—
	5 and 6	4.12	1.99	0.040
	7 and 8	1.11	2.04	0.588
Field of study	Nursing	Ref.	—	—
	Midwifery	−3.64	2.04	0.074
Resilience	Continuous	−0.41	0.06	<0.001

midwifery students had an average level of academic burnout. Some studies have reported an average level of academic burnout in students, which is in line with the results of the present study [9, 11, 21, 34]. Problems such as the high volume of lessons, multiple assignments, concerns about the future career, and financial problems are common during college education, which may consequently cause depression [5, 17, 44]. The results showed that the level of resilience in nursing and midwifery students was moderate to high, and nursing students had a higher rate of resilience than midwifery students. Resilience is individual differences in coping with and responding to difficult situations [25]; therefore, the higher resilience of nursing students than midwifery students can be related to their individual differences.

Bahadir-Yilmaz showed low resilience in Turkish nursing and midwifery students [3]. However, there is some evidence that students have a high degree of resilience [21, 34, 44], confirming the results of the current study. High levels of resilience, as a protective factor, can help students cope with academic problems and tensions and thus reduce their academic burnout [4, 5].

Decreased academic burnout, in turn, can have several positive educational outcomes, including academic achievement [6]. The results showed a statistically significant and inverse association between resilience and academic burnout in nursing and midwifery students so that individuals with higher resilience had lower levels of burnout and academic failure. Several studies also suggest a significant and inverse association between resilience and

academic burnout [5, 23, 34, 39]. Students with resilience skills can manage difficult life situations and adapt themselves to stressful situations, which increases their performance and reduces their academic burnout [2, 6, 34].

The results showed a statistically significant relationship between semester and academic burnout so that academic burnout was significantly higher in students of fifth and sixth semesters than students of third and fourth semesters. This finding is consistent with the results of Fernández-Castillo and Fernández-Prados [42] but in contrast with the results of Shin et al. and Kamalpour et al. [34, 41]. As students progress to higher semesters, their experiences in dealing with stressful events are expected to increase, which can lead to a reduction in burnout.

In the present study, academic burnout was significantly higher in students living in dormitories than those living with their families. This finding is consistent with the results of Wang et al. and Cheng et al. [11, 45] but in contrast with the results of Lee [35]. It seems that living with family can reduce many of the stresses of student life and increase their resilience.

The results showed no statistically significant relationship between academic burnout and age. This finding is in contrast with the results of Oyoo [37]. In this study, academic burnout was higher in the older students than the younger ones. As students get older, their personal experiences as well as their self-confidence are expected to increase, which plays an important role in increasing their resilience and thus reducing their academic burnout.

The results also showed no statistically significant relationship between academic burnout and gender. This finding is in line with the results of Oyoo [37]. In this study, academic burnout was higher in the male students than the female ones. Due to the nature of nursing and midwifery disciplines, male and female students are expected to have a high level of resilience to be able to react appropriately to different types of stressors and not suffer from academic burnout.

4.1. Limitations. This study had some limitations. First, due to the cross-sectional nature of the study, it was not possible to investigate the causal association between variables. Data were collected through self-report, which may have affected the accuracy of the data. Interventions such as workshops are recommended to prevent academic burnout and increase resilience among students.

5. Conclusions

Nursing and midwifery students had moderate levels of academic burnout. In terms of resilience, nursing and midwifery students had moderate to high levels of resilience, and nursing students were more resilient than midwifery students. A significant and inverse association was found between resilience and academic burnout in nursing and midwifery students. Regarding the negative correlation between resilience skills and academic burnout, face-to-face or virtual workshops are recommended to be held to

enhance students' resilience skills. Further cross-sectional and longitudinal studies are also suggested to investigate the impacts of such workshops on resilience and academic burnout.

Data Availability

The identified data sets analyzed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest

The authors declare that there are no conflicts of interest.

Acknowledgments

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