

Relationship between resilience and professional moral courage among nurses

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Abstract

Nurses need to be resilient to be able to endure their working conditions, and their moral courage can affect their resilience. This work aimed at studying the relationship between resilience and professional moral courage among nurses working in hospitals.

This descriptive cross-sectional study was conducted on 375 nurses working in teaching hospitals in the city of Ardabil in Iran in 2019. Data was collected using the following questionnaires: a demographic questionnaire, Sekerka et al. Moral Courage Scale and Davidson-Connor Resilience Scale. The reliability of the Davidson-Connor Resilience Scale, and Moral Courage Scale were found to be 89% and 85% using the test-retest method. The data were analyzed by Pearson correlation coefficient, t-test, variance analysis, and linear regression using the SPSS software version 24.

In participating nurses, mean scores were 6.35 ± 0.5 for total moral courage (favorable) and 79.35 ± 0.35 (moderate) for resilience, respectively. A positive and significant relationship was observed between resilience and professional moral courage ($P < 0.05$, $r = 0.1$). Given the positive and significant relationship between resilience and professional moral courage, nurses require to have the high moral courage to enhance their resilience. Determining factors affecting moral courage and resilience, as well as finding strategies and creating an appropriate moral climate can increase nurses' morally courageous behaviors and resilience.

Keywords: Professional moral courage; Resilience; Nurses; Moral development, Economics.

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Received: 6 Aug 2020

Accepted: 16 Jan 2021

Published: 15 Feb 2021

Citation to this article:

Abdollahi R, Iranpour S, Ajri-Khameslou M. Relationship between resilience and professional moral courage among nurses. *J Med Ethics Hist Med.* 2021; 14: 3.

Introduction

Nurses, the largest share of hospitals' human resources in the healthcare system (1), often face complex problems due to their professional role (2). Nursing is among occupations with high stress and high physical and mental workload (3, 4), and their workload was measured to be 62% in a study by Holden et al. (5). Enduring such conditions and properly performing nursing duties require resilience (6), as well adapting to challenges and threats and overcoming them (7). To manage professional problems, nurses should develop resilience to overcome negative experiences (8). Another factor affecting resilience is moral difficulties in the healthcare system (9). Advances in medical sciences have significantly affected clinical nursing work. Cultural differences, end-of-life issues, organ donation, violence, medical errors, and workplace abuse increase moral conflicts in nurses (10, 11). As moral agents, nurses need moral courage, as an important component of moral competence, to properly manage moral problems and professional commitments. In the study by Moosavi et al. the mean score of moral courage of nurses was found to be 63.72 ± 5.91 (12). Moral courage is a worthwhile virtue that help nurses make correct moral decisions at moral crossroads and upon observing unethical acts (13). In the study by Oshio et al., a significant relationship was found between conscientiousness and resilience (14). Resilience appears to be an essential factor in the nursing profession, and many factors could affect its development and enhancement (e.g., individual's personality

and mentality traits). In the conceptual model by Ebrahimi Ghassemi et al., a positive correlation was found between resilience and moral courage among nursing students (15).

Few studies have been conducted on resilience-related issues and factors affecting it, including moral courage in clinical settings. The importance of these issues in the quality of nursing services, as well as their potential and widespread future effects on nurses, patients, and healthcare system, enhances the need to address such issues, and thus, this study aimed at addressing the relationship between resilience and professional moral courage of nurses working in teaching hospitals in the city of Ardabil, Iran, in 2019.

Materials and Methods

This descriptive cross-sectional study was conducted in five teaching hospitals (trauma center, a provincial pediatric center, maternity center, provincial ophthalmology and urology center, general hospital) in Ardabil, Iran, in 2019. From 1350 nurses working in these five hospitals, 422 were selected to participate using a two-stage sampling: First, sample size per hospital was determined based on the number of nurses in each hospital (140 in Imam Khomeini, 47 in Imam Reza, 94 in Alavi, 78 in Fatemi, and 63 in BuAli); second, convenience sampling was conducted in each hospital. Participants were from all departments including internal medicine, surgery, urology, neurology, intensive care unit (ICU), coronary care unit, and emergency department. The inclusion criteria were as follows: at least a bachelor's degree, no physical or mental diseases, and a

minimum one year of work experience.

Data was collected using three questionnaires, and the participating nurses' response rate to these questionnaires was 96.5%: (i) a demographic questionnaire including gender, education level, age, years of work experience, marital status, organizational position, serving ward, managerial experience, income, type of employment, number of children, alma matter, and plans with benefits of productivity (e.g., Iranian performance-based payment plan). (ii) Connor-Davidson 25-item resilience scale questionnaire with 5-point Likert scale scoring: "totally incorrect" =0, "rarely correct" =1, "sometime correct" =2, "often correct" =3, and "always correct" =4. Subjects with a score higher than 50 were considered resilient (14). In a previous study, the reliability of the Connor-Davidson questionnaire using Cronbach's alpha method was 0.89, and also the reliability coefficient of the test-retest method was 0.87 (16). The reliability of the scale for use in this study was estimated to be 89% using the test-retest method. (iii) Professional moral courage 15-item questionnaire by Sekerka et al. with five dimensions, including moral agency, multiple values, the endurance of threat, going beyond compliance, and moral goals. The dimension of moral agency concerns the individual's readiness and heart-felt desire to manage and resolve moral problems, and therefore the desire to conduct moral behaviors. The dimension of multiple values refers to the individual's ability to focus and combine personal values

with professional and organizational values. The dimension of the endurance of threat refers to the individual's understanding and recognition of threats, pressures, and fears. The dimension of going beyond compliance refers to an individual who is first to conduct moral behaviors in the organization, prevent unethical acts, and attempt to enhance moral ideals. The dimension of moral goals indicates clarification and setting of goals considering respect, honesty, and other moral virtues. Scoring was based on a 7-point scale from "never" to "always". The score range of each dimension was minimum 3 and maximum 21, and the total score was minimum 15 and maximum 105, respectively. For each dimension, a score was added for each dimension (3 questions) and the total was divided by three. For overall professional moral courage, the total scores for all items (15 questions) divided by 15 (17). The reliability of this scale was measured by Connor among the nursing population; the overall moral courage scale showed good internal consistency, with a Cronbach's alpha coefficient of 0.853 (18). This questionnaire was translated into Persian by Mohammadi et al. and its validity was evaluated by 10 experts in the bioethics field; the CVI index was 81%, and its reliability was calculated using Cronbach's alpha coefficient to be 0.85 (19). The reliability of the scale for use in the present study was calculated to be 85% using the test-retest method.

Informed consent was obtained from all participants, and the questionnaires were distributed among nurses during morning,

evening, and night shifts. Collected data kept confidential and anonymous, and that participants were free to leave the study at any stage. The sampling stage lasted four months starting from October 19, 2019, to December 14, 2019. This study was approved by the Ethics Committee of Ardabil University of Medical Sciences (Code: IR.ARUMS.REC.1396.241).

Data were analyzed in SPSS-24 using descriptive (mean, standard deviation), inferential (Pearson correlation coefficient,

t-test, variance analysis, and linear regression) statistical tests; $P < 0.05$ was taken as the significance level.

Result

A total of 375 nurses with a mean age of 33.18 ± 6.63 years, ranging from 35 to 45 years participated in the study. The majority of participants were women (83%), with less than five years of work experience (39.9%) and a mean of 2.33 ± 0.68 years of work experience. Moreover, most nurses (54.3%) used productivity plan benefits (Table 1).

Table 1- Participants' distribution frequency data in terms of demographic details

Variable	Variable	Frequency	Percentage
Gender	Male	64	17
	Female	311	83
Age	22-25	36	9.6
	26-29	95	25.3
	30-34	94	25
	35-45	127	33.8
	Mean \pm SD	33.18 \pm 6.63	
Work History	1-5	150	39.9
	6-9	75	19.9
	10-14	84	22.3
	15-30	65	17.3
	Mean \pm SD	8.75 \pm 5.98	
Working Shift	Fixed Morning	39	10.4
	Fixed Afternoon	0	0
	Fixed Night	4	1.1
	Rotating	332	88.3
Qualification	B.Sc.	367	97.6
	M.Sc.	8	2.4
Hospital	Imam Khomeini	126	33.5
	Alavi	84	22.3
	Fatemi	70	18.6
	Imam Reza	43	11.4
	BuAli	52	13.8
Productivity Plan	Yes	204	54.3
	No	171	45.5

The participating nurses' mean resilience score was 79.35 ± 0.45 , and based on the

statistical analysis, of all demographic details, only mean resilience score had a

significant relationship with productivity plan benefits ($P<0.05$, $r=0.2$), such that

nurses with productivity plan benefits were more resilient (Table 2).

Table 2-The relationship of demographic details with moral courage and resilience

Variable		Moral courage Mean \pm SD	Resilience Mean \pm SD
Gender	Male	6.23 \pm 0.54	77.70 \pm 11.28
	Female	6.33 \pm 0.49	79.69 \pm 8.48
P-value		$P=0.07^*$	$P=0.1^*$
Education	B.Sc.	6.35 \pm 0.50	79.69 \pm 8.48
	M.Sc.	6.19 \pm 0.54	79.33 \pm 9.08
P-value		$P=0.3^*$	$P=0.7^*$
Hospital	Imam Khomeini	6.34 \pm 0.54	79.28 \pm 10.57
	Alavi	6.47 \pm 0.41	80.82 \pm 6.27
	Fatemi	6.21 \pm 0.64	77.60 \pm 9.10
	Imam Reza	6.28 \pm 0.48	75.86 \pm 10.32
	BuAli	6.38 \pm 0.43	82.42 \pm 5.67
P-value		$P=0.02^{**}$	$P=0.2^{**}$
Working Shift	Fixed Morning	6.28 \pm 0.53	79.25 \pm 9.07
	Fixed Afternoon	6.32 \pm 0.44	80.34 \pm 5.53
	Fixed Night	6.01 \pm 0.58	83.50 \pm 4.12
	Rotating	6.36 \pm 0.50	79.55 \pm 9.05
P-value		$P=0.2^{**}$	$P=0.2^{**}$
Work History	1-5	6.31 \pm 0.55	78.70 \pm 8.84
	6-9	6.32 \pm 0.56	78.78 \pm 10.81
	10-14	6.38 \pm 0.43	79.30 \pm 8.77
	15-30	6.43 \pm 0.34	81.78 \pm 7.10
P-value		$P=0.03^{**}$	$P=0.1^{**}$
Age	22-25	6.10 \pm 0.79	77.16 \pm 8.14
	26-29	6.39 \pm 0.41	79.08 \pm 8.33
	30-34	6.26 \pm 0.60	78.43 \pm 11.41
	35-45	6.23 \pm 0.36	80.34 \pm 7.84
P-value		$P=0.00^{**}$	$P=0.1^{**}$
Use of productivity plan	Yes	6.33 \pm 0.53	8.23 \pm 10.048
	No	6.36 \pm 0.47	80.70 \pm 7.47
P-value		$P=0.6^*$	$P=0.00^*$

*Independent sample T-test

**ANOVA

The mean moral courage score (6.35 \pm 0.50) was favorable; the highest mean moral courage score (1.34 \pm 0.58) was in the

dimension of multiple values, and the lowest (1.26 \pm 0.33) in moral agency (Table 3).

Table 3- The relationship of resilience with moral courage and overall moral courage dimensions

Details	Moral Courage Mean ± SD	Resilience Mean ± SD	r	P-value
Moral agency	1.26±0.33	79.35±0.45	0.1	0.00
Multiple values	1.34±0.58		0.2	0.00
Endurance of threat	1.33±0.55		0.1	0.00
Going beyond compliance	1.27±0.27		0.2	0.00
Moral goal	1.27±0.57		0.1	0.00
Total moral courage	6.35±0.50		0.4	0.00

Statistical analysis of data showed a positive and significant relationship between moral courage and participants' age ($P<0.05$, $r=0.1$), such that older nurses had greater moral courage. A positive and significant relationship between moral courage and the serving hospital was observed ($P<0.03$) (Table 2). The Pearson test results showed a positive and significant relationship between moral courage and resilience ($P<0.05$, $r=0.4$), such that subjects with higher moral courage had higher resilience. Resilience

also had significant and positive relationships with subscales of moral courage (moral agency, multiple values, the endurance of threat, going beyond compliance, and moral goals) (Table 3). The linear regression analysis showed that resilience is significantly affected by both moral courage and productivity ($P<0.05$), such that moral courage affected resilience the most (0.45) and productivity the least (0.12) (Table 4). These variables predicted 22% of the total variance of resilience.

Table 4- Prediction of nurses' resilience based on moral courage and use of productivity plan benefits

Details	Non-Standard Coefficient	Standard Coefficient	t	P-value	R2
Moral courage	8.11	0.45	9.94	0.00	0.22
Productivity plan	2.27	0.12	2.75	0.00	

Discussion

This work studied the relationship between resilience and professional moral courage in nurses working in hospitals. Nurses' mean resilience score was in moderate range, in line with the results by Deldar et al. (20). As of the present study, in a study conducted by Çam and Büyükbayram, resilience was also reported to be moderate (21). Unlike the present study, a study by Mealer et al. reported high levels of resilience in nurses,

especially in the intensive care unit (ICUs) (22); nurses work in different wards depending on their level of resilience, and resilient nurses tend to work and remain in ICUs. The present study's participants were from all different wards, and the mean resilience score of the nurses was moderate, and no difference was observed in nurses' resilience level from different wards. A study by Gillespie et al. on operating room (OR) nurses in Australia reported a high

level of resilience (23). The difference in the results can be attributed to the assessment of resilience according to various mental and behavioral characteristics in nurses as well as their different environmental and personal features.

In the present study, a significant relationship was observed between resilience and having productivity plan benefits; nurses with such plan benefits had higher resilience because they had higher income, which resulted in higher resilience. This relationship can be attributed to Iran's economic conditions resulting from sanctions; higher income (e.g., through performance-based payment plan) increased resilience. However, resilience had no relationship with other demographic details, in line with the results of Abdollahzadeh et al. (24). Unlike the present study's results, Lee et al. reported that pediatric intensive care unit (PICU) nurses with less than seven years of work experience had higher resilience (25). Previous studies showed that other factors such as self-esteem, self-efficacy, and economic factors can affect nurses' resilience (14, 26). Given Iran's economic sanctions, economic factors have largely affected nurses' resilience level, and using productivity plan benefits is an example of this effect. In the present study, no significant relationship was found between the mean score of resilience and participants' age. Different results of the present work in Iran when compared to other studies can be attributed to factors such as organizational

support and lower workload for nurses in developed countries.

Participating nurses had favorable mean moral courage scores, in line with the study's results by Moosavi et al. conducted on nurses in Tehran hospitals (12). Mahdaviseresht et al. also reported a high mean moral courage score in nurses (27). However, nurses' mean moral courage score was moderate in a study by Hanna et al. (28) and was poor in a study by Gallagher (29). All these studies used the same tool and Professional Moral Courage (PMC) questionnaire to collect data. The difference in moral courage level in these studies can be attributed to the effect of certain factors on moral courage, including ethical climate, nurses' age, organizational culture, managers' support, organization's support, and organization's non-acceptance (12). Further investigations are required to study the relationship of such factors with nurses' moral courage. In the present study, a positive and significant relationship was observed between nurses' age and moral courage, such that older nurses had greater moral courage, in line with the results by Mahdaviseresht et al. (27). Nejad sarvari et al. reported that physicians' moral sensitivity increases with age (30). Individuals' information and awareness of a situation increase with age, and their capacity to recognize behaviors and the reasons behind them also develop with age, and hence older nurses can have greater moral courage in stressful situations.

The highest mean score of moral courage

was in the dimension of multiple values indicating the individual's ability to focus and combine personal values with professional and organizational values. Moreover, the lowest mean score of moral courage was in the dimension of the moral agency relating to the individual's readiness and willingness to manage moral issues, and therefore the desire to conduct moral behavior. However, in a study by Moosavi et al., the moral agency had the highest score and endurance of threat had the lowest score (12); the difference in results was due to variances in personality traits (e.g., individuals' different adaptation abilities, readiness to manage moral problems) and differences in nurses' working conditions (e.g., organizational support and various organizational atmosphere). High scores in multiple values can be beneficial in enabling nurses to match their values and ideals with those of the organization, thereby fulfilling organizational goals, which is quality care.

Moreover, the present study's results showed a direct and significant relationship between resilience and moral courage as well as resilience and use of productivity plan benefits, such that 45% and 12% of changes in resilience are due to moral courage use of productivity plan benefits, respectively. Generally, 22% of changes in resilience is due to these two variables. Oshio et al. concluded that personality traits including neuroticism, extraversion, openness, agreeableness, and conscientiousness had a positive and significant relationship with resilience (14).

Nakaya et al. reported that personality factors affect resilience (31). Bazrafshan et al. observed a significant relationship between nurses' conscientiousness and resilience (32). Ebrahimi Ghassemi et al. reported a significant and positive correlation between resilience and moral courage of nursing students (15). This finding can be explained as individuals with higher levels of moral courage have a reasonable understanding of their abilities due to features such as the endurance of threat, moral goals, and multiple values; therefore, they can manage stressors and have higher flexibility, leading to increased resilience in nurses. This study revealed a significant and positive relationship between moral courage and resilience. A shortcoming of this study, which limits the generalizability of the results, was sampling strategy, specifically in sampling from nurses of Ardabil hospitals, and hence future studies in other settings are recommended. Moreover, participants' mental status when completing questionnaires could have affected the results, which were beyond the researcher's control.

Conclusion

Moral courage has an important role in improving resilience in nurses. Considering the significant relationship between moral courage and resilience, enhancing nurses' sense of accountability in managing patient problems and in reinforcing their role of patient support increases their courageous behaviors and their resilience. High levels of

resilience in nurses enable them to use adaptive skills in coping with stress and help them productively endured hospitals' stressful environment. Resilience can be enhanced through constructive interactions with colleagues, and hence hospital managers should promote moral courage among nurses to increase their resilience.

Measures should be taken to promote moral courage in nurses, to improve the quality of nursing care. Increasing nurses' awareness of moral principles leads to morally courageous behaviors in nurses and thus increases their resilience. Given that moral courage increases with age, experienced nurses as coaches of newly-employed nurses can help improve courageous behaviors in them.

This study also showed moderate levels of resilience in nurses, hence changes are

required to enhance the levels. Researchers, nursing managers, and planners should investigate other factors affecting resilience, and develop required strategies (e.g., creating a support network, promoting optimism, and providing role model benefits). Furthermore, further studies are necessary to clarify the relationship between resilience and moral courage in nurses.

Acknowledgements

This study was approved by Ardabil University of Medical Sciences and was part of an M.Sc. thesis. Authors wish to thank participating nurses.

Conflicts of Interests

No potential conflict of interests was reported by the authors.

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