



The relationship between work-family conflict and nurses' professional commitment in Iran, 2024: A cross-sectional study

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Received: 1 July 2025 **Revised:** 3 September 2025 **Accepted:** 5 November 2025 **e-Published:** 1 December 2025

Abstract

Background: Balancing work and family responsibilities remains a pervasive challenge in nursing, attracting significant international research attention. Difficulties in managing these demands, combined with workplace pressures, can adversely affect nurses' professional commitment.

Objectives: This study examined the association between work-family conflict and professional commitment among nurses in Iran.

Methods: From September to December 2023, a cross-sectional study was conducted with 270 nurses employed in medical-surgical units in Tehran, Iran. Participants were selected using a quota sampling method. Data collection involved a demographic questionnaire, the Work-Family Conflict Scale, and the Nursing Professional Commitment Scale. Statistical analyses were performed using SPSS version 25.

Results: Among the participants (n=270), 215 (79.6%) were women, and 156 (57.8%) were unmarried, with a mean age of 31.41 years (SD=7.56). A significant negative correlation was observed between work-family conflict and professional commitment ($r=-0.27$, $P<0.001$). The mean work-family conflict score indicated a moderate level (61.58 ± 11.57), while the mean professional commitment score was in the upper-moderate range (83.72 ± 16.02). Higher professional commitment was noted among nurses aged over 40 years, those working morning shifts, and those with permanent employment status ($P<0.05$).

Conclusion: The findings suggest that work-family conflict undermines nurses' professional commitment and efficiency. Healthcare administrators should implement supportive strategies and family-friendly policies, identify nurses experiencing high levels of work-family conflict, and design interventions aimed at mitigating these conflicts to enhance professional commitment.

Introduction

Work environments vary considerably in the degree of stress they impose on employees.^[1] Work-family conflict (WFC) emerges when individuals attempt to fulfill multiple roles, such as those of working parents.^[2] In nursing, work settings are frequently structured and demanding, and despite advances in human resource management, persistent challenges remain. These challenges often result from a mismatch between job demands and personal life circumstances.^[1] Such imbalances can negatively affect psychological well-being, leading to heightened perceptions of conflict in achieving work-life balance.^[3]

WFC operates bidirectionally, encompassing both work-

to-family interference and family-to-work interference, whereby pressures from one domain impede functioning in the other.^[4] Greenhaus and Beutell conceptualized WFC as comprising three core dimensions time-based, strain-based, and behavior-based conflicts which together provide a comprehensive framework for understanding these interactions.^[5]

Empirical research has linked WFC among nurses to a range of adverse outcomes, including depressive symptoms, dissatisfaction in professional and personal domains, psychological fatigue, and reduced job performance. In Iran, WFC is particularly prevalent among nurses due to high work demands, inadequate organizational support, limited job flexibility, and

mandatory overtime.^[6] Notably, among healthcare professionals, nurses rank fourth in experiencing work-related conflicts.^[7] A recent study in Iranian teaching hospitals reported that 93% of nursing staff experienced moderate to high WFC,^[8] while a study in China found that 47.3% of nurses experienced moderate WFC and 42.7% experienced high WFC.^[9] WFC consistently ranks among the top ten occupational stressors in nursing, posing risks to both individual well-being and quality of patient care.^[10] The spillover of such conflicts into the workplace can diminish nurses' job motivation and organizational commitment.^[11]

Professional commitment, rooted in the broader concept of organizational commitment, reflects an individual's dedication to organizational goals and values.^[12] It encompasses responsibility, adherence to professional obligations, and commitment to personal and career development.^[13] Among nurses, professional commitment links them to their chosen career, reflecting both belief in professional principles and motivation to pursue growth, uphold professional values, and maintain ongoing engagement.^[14]

Levels of professional commitment among nurses vary across regions and countries.^[15–17] In Iran, some studies report that most nurses demonstrate moderate levels of professional commitment, while others, such as research in Khuzestan province, indicate relatively high levels.^[18,19] Factors influencing these variations include ethical orientation, educational attainment, economic conditions, job motivation, and organizational climate. Nursing demands strong professional commitment and dedication to lifelong learning, as nurses must advocate for patients' rights and perform their duties to the highest standards.^[20]

International evidence indicates that WFC negatively affects professional and organizational commitment. For instance, Zheng and Wu found that higher levels of WFC were associated with lower organizational and professional commitment among nurses in China.^[21] These findings underscore that WFC is a global concern affecting nurses' well-being and professional functioning, warranting investigation in diverse sociocultural contexts, including Iran.

Compared to many Western healthcare systems, Iranian nurses often contend with mandatory overtime, limited autonomy, and inconsistent labor protection enforcement, largely shaped by national labor policies and hierarchical hospital structures.^[8] These systemic factors contribute significantly to the prevalence and intensity of WFC among Iranian nurses.^[22] Additionally, cultural expectations regarding gender roles -particularly for

women, who constitute the majority of the nursing workforce- further complicate the balance between professional and family responsibilities.^[23] Such conditions may compromise nurses' capacity to maintain high professional commitment, as chronic exposure to organizational stressors without adequate support can erode motivation, job satisfaction, and professional identity. Therefore, examining WFC and its association with professional commitment within the Iranian sociocultural and organizational context offers valuable insights and addresses a gap in the international literature.

Objectives

This study, conducted in 2024, investigates the relationship between work–family conflict and professional commitment among nurses employed in general wards in Tehran, Iran.

Methods

Study design and participants

This cross-sectional study was conducted to examine the relationship between work–family conflict (WFC) and professional commitment among nurses. The study was implemented from September to December 2023 and involved nurses employed in medical-surgical units at Sina and Dr. Shariati Hospitals, both affiliated with Tehran University of Medical Sciences. These hospitals were purposefully selected as they met the study's objectives and operate under the university's ethical and regulatory framework. Each hospital includes 16–18 general wards and employs nurses from diverse regions across Iran, providing a representative sample for the target population.

Inclusion criteria comprised: willingness to participate and provide informed consent, possession of at least a bachelor's degree in nursing, current employment in a general ward, a minimum of six months' experience in the current ward, and adequate physical and mental health. Nurses who had experienced major life stressors within the previous six months (e.g., bereavement or divorce) were excluded. Additionally, nurses working in specialized units, such as intensive care unit (ICU), coronary care unit (CCU), dialysis, and emergency departments, were excluded to maintain homogeneity in work characteristics. Participants with incomplete questionnaire responses were also omitted from the analysis.

Sample size

The sample size was calculated based on the anticipated correlation between WFC and professional commitment. Assuming a minimum correlation coefficient of 0.2,^[24] a

95% confidence level, and 90% statistical power, the required sample size was estimated at 259 using the following formula:

$$n = \frac{(z_{1-\frac{\alpha}{2}} + z_{1-\beta})^2}{w^2} + 3, \quad w = \frac{1}{2} \ln \frac{1+r}{1-r}, \quad w = \frac{1}{2} \ln \frac{1+0/2}{1-0/2} = 0/2, \quad n = \frac{(1/96+1/28)^2}{0/2^2} + 3 = 259$$

Substituting the values yielded a sample size of 259; ultimately, 270 nurses participated in the study. Initially, quotas for each hospital were established based on the total number of nurses in general wards. Using data from the nursing services office, quota sampling ensured proportional representation across the two hospitals. Subsequently, sampling within each ward was stratified across three shifts, resulting in 168 nurses from Dr. Shariati Hospital and 102 nurses from Sina Hospital.

Data collection instruments

Data were collected using self-administered questionnaires after obtaining formal permission from the original developers and the Persian translators of the instruments. The following tools were used:

Demographic information questionnaire: This questionnaire collected participants' background characteristics, including age, gender, marital status, employment status, work experience, education level, type of shift, and number of monthly work shifts.

Carlson's work-family conflict questionnaire: This instrument measures two primary dimensions: work-to-family interference (e.g., "My work keeps me from my family activities more than I would like") and family-to-work interference (e.g., "Due to stress at home, I am often preoccupied with family matters at work").^[8] Each dimension includes time-based, strain-based, and behavior-based subdimensions, forming a six-dimensional structure.^[25] The questionnaire contains 18 items, each rated on a 5-point Likert scale, ranging from 1 ("completely disagree") to 5 ("completely agree"), yielding total scores between 18 and 90. Higher scores indicate greater WFC. No items are reverse-scored. The validity of the questionnaire in Iran was previously established by Dargahi et al., with a reported Cronbach's alpha of 0.84.^[24] In the present study, reliability was determined to be 0.89.

Nursing Professional Commitment Scale (NPCS): The NPCS, originally developed in 1968, consists of 26 items across five domains: perception of nursing (6 items), satisfaction with the profession (4 items), involvement in the profession (6 items), devotion to the profession (5 items), and intention to remain in the profession (5 items).^[26] Responses are scored on a 5-point Likert scale from 1 ("completely disagree") to 5 ("completely agree"),

with total scores ranging from 26 to 130; higher scores reflect greater professional commitment. The original instrument demonstrated a reliability of 0.87. Following localization for use in Iran, its validity was confirmed, and reliability was measured at 0.74.^[27] In the current study, Cronbach's alpha indicated a reliability of 0.91.

Procedures

Following ethical approval and institutional authorization from the Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, a trained researcher met with hospital directors to explain the study objectives. Written informed consent was obtained from all participating nurses in an appropriate and private setting. Questionnaires were distributed across all three shifts using targeted quota sampling to ensure proportional representation and minimize selection bias. This approach accounted for potential differences in professional commitment between shifts, such as the enhanced organizational support typically observed during morning shifts and the fatigue associated with night shifts, which may exacerbate WFC.

Participants were allocated a three-day period to complete the questionnaires, providing flexibility to accommodate workload and personal availability and reducing the potential stress of immediate completion. The researcher emphasized the importance of honest responses and created a quiet environment conducive to thoughtful reflection. Confidentiality was assured, and participants were informed that only the research team would have access to the data. Completion time was approximately 15-20 minutes per participant.

Ethical considerations

The research protocol received formal approval from the Ethics Committee of Tehran University of Medical Sciences (Ethics Code: IR.TUMS.FNM.REC.1402.091). Administrative approvals were obtained from the governing bodies of the participating hospitals. All participants were informed of the voluntary nature of the study and assured that non-participation would have no repercussions. Comprehensive confidentiality measures were implemented, restricting access to collected data exclusively to the research team. Written informed consent was obtained prior to data collection. Upon completion of the study, the participating hospitals received a full report of the findings.

Data analysis

All statistical analyses were performed using SPSS Statistics, Version 25. Data normality was assessed using the Kolmogorov-Smirnov test. Descriptive statistics, including frequencies, percentages, means, and standard

deviations, were calculated to summarize participant characteristics and study variables. Inferential analyses were conducted to examine relationships and group differences: independent t-tests were used for comparisons between two groups, one-way ANOVA for comparisons among multiple groups, and Pearson's correlation coefficient to assess the strength and direction of associations between continuous variables. A P-value of less than 0.05 was considered statistically significant. This approach allowed for a comprehensive evaluation of both the distribution of study variables and the hypothesized relationships between WFC and professional commitment among nurses.

Results

Out of approximately 330 distributed questionnaires, 270 nurses completed all three instruments and were included in the analysis. The majority of participants were female (n=215, 79.6%), and over half were unmarried (n=156, 57.8%). Participants' mean age was 31.41 ± 7.56 years, with a mean professional experience of 6.91 ± 6.68 years. Most nurses held a bachelor's degree (n=238, 88.1%). Regarding work schedules, 104 participants (38.5%) worked fixed shifts, while 166 (61.5%) were assigned to rotating shifts. Detailed demographic and occupational characteristics are presented in Table-1.

Table-1. Demographic characteristics of the participants (N=270)

Variable	Category	Number (%)
Gender	Male	55 (20.4%)
	Female	215 (79.6%)
Marital status	Single	156 (57.8%)
	Married	114 (42.2%)
Education level	Bachelor's degree	238 (88.1%)
	Master's degree	32 (11.9%)
Type of shift	Fixed shift	104 (38.5%)
	Rotating shift	166 (61.5%)
Employment status	Permanent	156 (57.8%)
	Non-permanent	114 (42.2%)
		Mean \pm SD
Age (years)		31.41 ± 7.56
Number of shifts per month		29 ± 4.28
Work experience (years)		6.91 ± 6.68

SD, Standard Deviation.

Assessment of WFC revealed a mean total score of 61.85 ± 11.57 , indicating a moderate level of conflict among the nursing staff. Among the subdimensions, the highest

mean was observed for "time-based work-to-family interference" (12.59 ± 2.57 ; range 3–15), whereas the lowest mean was reported for "strain-based family-to-work interference" (8.51 ± 3.27). Overall, work-to-family interference scores were higher than those for family-to-work interference, highlighting a greater impact of professional demands on family life [Table-2].

The overall mean professional commitment score was 83.72 ± 16.02 , reflecting a moderate to relatively high level of commitment. Within the subscales, "devotion to the nursing profession" had the highest mean (3.82 ± 0.71), while "intention to remain in the nursing profession" had the lowest mean (2.62 ± 0.90) [Table-2].

Pearson's correlation analyses demonstrated a significant inverse relationship between WFC and overall professional commitment ($r = -0.27$, $P < 0.001$). Among the specific dimensions, the strongest negative correlation was observed between WFC and the "intention to remain in the nursing profession" subscale ($r = -0.29$, $P < 0.001$). Additionally, "behavior-based family-to-work interference" showed the greatest adverse relationship with overall professional commitment ($r = -0.27$, $P < 0.001$) [Table-2].

Supplementary analyses examining demographic and occupational variables revealed that professional commitment was significantly higher among nurses aged over 40 years, those working morning shifts, and those with permanent employment status. No other demographic characteristics, including gender, marital status, or educational level, were significantly associated with either professional commitment or WFC [Table-3].

Discussion

The primary objective of this study was to examine the relationship between WFC and professional commitment among nurses working in general wards in Tehran, Iran. The results demonstrated a significant inverse association, indicating that higher levels of WFC were associated with lower professional commitment. This finding underscores the importance of balancing professional and personal roles, as work-family tension can undermine nurses' engagement and dedication to their profession. However, the modest strength of this correlation suggests that additional variables, including organizational climate, job satisfaction, leadership support, and occupational stressors, may also influence professional commitment.^[11,20] International literature consistently demonstrates that role conflict adversely affects professional behavior and commitment across diverse healthcare settings, though the underlying mechanisms

vary depending on cultural, organizational, and methodological contexts. For example, studies in China have identified emotional exhaustion as a key mediating factor linking WFC to decreased professional commitment, whereas research in Turkey highlights the protective role of organizational and psychosocial support.^[3,28]

Among the dimensions of professional commitment, the "intention to remain in the nursing profession" was most negatively affected by WFC. Prior studies in Iran have emphasized that WFC is an almost unavoidable challenge for nurses, largely stemming from systemic and managerial shortcomings.^[29] Contributing factors include consecutive shifts, mandatory overtime, insufficient resilience, inadequate salaries, and limited consideration of family responsibilities by nursing managers -all of which exacerbate WFC among Iranian nurses.^[30] Within the studied population, nurses reported a high sense of obligation to comply with institutional rules and regulations, often working beyond scheduled hours to fulfill professional duties.^[27] The demands of extended work hours, combined with insufficient time for family responsibilities, intensify time-related conflicts and contribute to a significant strain on nurses' work-life balance.^[30]

Psychological pressures in the workplace, coupled with limited time during shifts, have been reported to reduce organizational commitment.^[11] Several studies suggest that

professional commitment is a critical determinant of job satisfaction and is strongly correlated with nurses' intention to remain in the profession.^[17,20] Consequently, challenges such as WFC, which place additional pressure on nurses, reduce job satisfaction and increase turnover intentions.^[31]

The present study revealed that Iranian nurses experience WFC at a moderate level, consistent with findings from Turkey^[3] and Saudi Arabia.^[32] Conversely, studies in Taiwan and other regions of Iran have reported higher mean WFC scores among nursing staff.^[10,33] The higher interference from work-related responsibilities observed in the present study is likely attributable to the demanding nature of nursing shifts and systemic challenges within the Iranian healthcare system. Insufficient organizational support, staff shortages, and the prevalence of night shifts contribute to greater interference of work with family life, resulting in conflict between professional duties and parental or familial responsibilities.^[29] Cultural expectations in Iran, particularly for female nurses, emphasize the need to fulfill both professional and familial roles.^[23] However, rigid hospital schedules and the limited availability of family-supportive policies -such as flexible leave, childcare support, or shift swapping- exacerbate work-related pressures, leading to higher levels of conflict originating from work rather than family obligations.^[32]

Table-2. Pearson correlation between nurses' professional commitment and work-family conflict (N=270)

Study Variables (Score Ranges)	Mean±SD	Mean±SD, 1-5 Basis	Pearson's r	P-value
Work-family conflict as a predictor of professional commitment subscales				
Perception of nursing (6–30)	17.3 ±4.96	2.89 ±0.82	-0.24	< 0.001
Satisfaction with nursing profession (4–20)	12.54 ±3.32	3.13 ±0.83	-0.25	< 0.001
Involvement with nursing profession (6–30)	21.69 ±3.61	3.61 ±0.60	-0.20	< 0.001
Devotion to nursing profession (5–25)	19.11 ±3.54	3.82 ±0.71	-0.08	0.190
Remaining in nursing profession (5–25)	13.07 ±4.52	2.62 ±0.90	-0.29	< 0.001
Total nurses' professional commitment (26–130)	83.72 ±16.02	3.22 ±0.61	-0.27	< 0.001
Professional commitment as a predictor of work-family conflict subscales				
Time-based work-family interference (3–15)	12.5 ±2.57	4.20 ±0.85	-0.08	0.172
Time-based family-work interference (3–15)	9.81 ±2.69	3.27 ±0.89	-0.12	0.042
Strain-based work-family interference (3–15)	11.99 ±2.69	4.00 ±0.89	-0.20	< 0.001
Strain-based family-work interference (3–15)	8.51 ±3.27	2.84 ±1.09	-0.20	< 0.001
Behavior-based work-family interference (3–15)	9.54 ±2.49	3.18 ±0.83	-0.26	< 0.001
Behavior-based family-work interference (3–15)	9.41 ±2.72	3.14 ±0.90	-0.27	< 0.001
Total work-family interference (9–45)	34.11 ±6.11	3.79 ±0.67	-0.23	< 0.001
Total family-work interference (9–45)	27.73 ±6.85	3.08 ±0.76	-0.25	< 0.001
Total work-family conflict (18–90)	61.85 ±11.57	3.44 ±0.64	-0.27	< 0.001

SD, Standard Deviation.

Table-3. Association between demographic characteristics and work-family conflict and professional commitment (N=270)

Demographic characteristics		Work-family conflict		Nurses' professional commitment	
		Mean \pm SD	Test result	Mean \pm SD	Test result
Age, years ^a	≤ 29	61.53 \pm 11.18	F=0.26	82.91 \pm 15.31	F=4.78
	30-39	62.57 \pm 10.29	P=0.766	81.78 \pm 15.94	P=0.009
	≥ 40	61.36 \pm 15.17		90.55 \pm 17.06	
Work experience, years ^a	< 5	61.72 \pm 10.89	F=2.09	82.79 \pm 14.99	F=2.51
	5-9	60.34 \pm 11.74	P=0.102	82.13 \pm 18.90	P=0.059
	10-14	66.96 \pm 11.93		82.85 \pm 13.65	
	≥ 15	61.13 \pm 13.08		90.15 \pm 15.89	
Number of shift per month ^a	< 20	63.80 \pm 9.64	F=0.88	86.73 \pm 10.29	F=1.74
	20-24	59.06 \pm 14.45	P=0.450	87.14 \pm 16.69	P=0.157
	25-29	62.40 \pm 13.87		85.98 \pm 19.60	
	≥ 30	62.08 \pm 10.12		81.96 \pm 14.91	
Gender ^b	Male	61.82 \pm 11.39	$t=-0.08$	83.44 \pm 16.88	$t=0.14$
	Female	61.96 \pm 12.37	P=0.936	83.79 \pm 15.83	P=0/884
Marital status ^b	Single	61.88 \pm 10.85	$t=0.05$	82.17 \pm 15.75	$t=-1.86$
	Married	61.81 \pm 12.45	P=0.957	85.83 \pm 16.22	P=0/064
Education level ^b	Bachelor	62.01 \pm 11.90	$t=0.62$	83.80 \pm 15.93	$t=0.23$
	Master	60.66 \pm 8.85	P=0.532	83.09 \pm 16.92	P=0/810
Employment status ^b	Yes(permanent)	61.83 \pm 12.80	$t=1.25$	85.72 \pm 18.62	$t=-2.37$
	No(non-permanent)	60.72 \pm 12.19	P=0.895	78.78 \pm 15.92	P=0/020
Type of shift ^b	Fix morning	58.74 \pm 14.20	F=1.07	91.68 \pm 17.70	F=2.80
	Fix evening	64.18 \pm 10.07	P=0.450	79.24 \pm 16.65	P=0/026
	Fix long	63.56 \pm 8.09		82.63 \pm 11.82	
	Fix night	60.48 \pm 13.71		81.30 \pm 15.82	
	Circular	61.98 \pm 11.26		83.59 \pm 15.55	

^aAnalysis of Variance (ANOVA); ^bIndependent samples t-test.

Interestingly, WFC was not significantly associated with demographic characteristics such as gender, marital status, or educational level, aligning with findings reported by Mosalanezhad et al.^[10] Nevertheless, other studies suggest that female nurses may experience greater WFC due to dual responsibilities in professional and family roles, shaped by sociocultural expectations.^[24] While some literature indicates that WFC increases with age and work experience,^[30] conflicting findings have been reported, reflecting the complexity of WFC dynamics and highlighting the need for context-specific investigations.^[4]

Regarding professional commitment, the study population exhibited moderate to high levels, consistent with previous research conducted in Iran and Turkey.^[15,17] Conversely, other studies in Iran have reported lower levels of professional commitment,^[16] which may be influenced by variations in staffing patterns, organizational support, workplace conditions, and cultural or social factors.^[34] In the present study, professional commitment was not associated with gender, marital status, or education level, consistent with prior

Iranian research.^[16] Some studies indicate a positive association between work experience and organizational commitment, while supervisors and senior nursing staff often display higher commitment levels than staff nurses or head nurses.^[15] Morning-shift nurses in particular demonstrated higher professional commitment, potentially due to stronger support systems and less fatigue during these hours.^[17]

The higher professional commitment observed among older and more experienced nurses may be explained by the development of emotional resilience, career stability, and greater familiarity with institutional expectations. Female nurses often exhibit higher professional commitment, which may be related to cultural perceptions of nursing as a female-dominated profession.^[17] Among the subscales, "devotion to the nursing profession" received the highest score, reflecting the intrinsic motivation and personal dedication characteristic of nursing as a human-centered, compassionate, and ethically demanding profession.^[35,36] In contrast, the lowest scores were observed in the "intention to remain in

the profession” subscale. Contributing factors include dissatisfaction with salary relative to workload, perceived lack of social respect for the nursing profession, and perceived inequities compared to other healthcare professions in Iran.^[13,37] These findings align with international research indicating that external factors, such as compensation and recognition, influence nurses' retention and career intentions.

Enhancing professional commitment is crucial not only for nurses' well-being but also for patient satisfaction, quality of care, and organizational efficiency.^[17] Research demonstrates that improvements in the nursing work environment -through adequate resources, supportive leadership, staff recognition, and organizational interventions- significantly increase professional commitment.^[38] Interventions aimed at reducing WFC, including flexible shift schedules, stress management and resilience-building programs, family-friendly policies, counseling, peer support, mentorship, and formal recognition, are critical for enhancing nurses' commitment and retention. Additionally, policy-level changes, such as enforcing labor protections, revising compensation structures, and limiting mandatory overtime, are necessary to ensure sustainable improvements in nurses' well-being and professional engagement.

This study addresses a significant gap in the Iranian nursing literature by examining the relationship between WFC and professional commitment -an area that has received limited attention within the national context. One of the major strengths of this research lies in the purposeful selection of two major referral hospitals in Tehran, which employ nurses from various regions across Iran. This sampling approach enhances the representativeness and generalizability of the findings to the broader nursing population. Furthermore, data collection was carefully balanced across all three work shifts, thereby minimizing potential shift-related bias and ensuring that nurses' experiences from different working hours were adequately captured.

Despite its strengths, several limitations should be acknowledged. First, the study was conducted exclusively in general medical-surgical wards, excluding specialized units such as ICU, CCU, dialysis, and emergency departments. As a result, the findings may not fully reflect the experiences of nurses in more specialized or high-intensity clinical environments. Future research should expand the scope to include these specialized units, encompass a wider geographic range of hospitals, and adopt longitudinal or mixed-method designs to provide a

more comprehensive understanding of how WFC and professional commitment evolve over time. Second, the psychological and emotional states of participants at the time of questionnaire completion -such as fatigue, stress, or workload pressure- were beyond the researchers' control and may have influenced their responses. Nurses experiencing higher levels of WFC might have provided less attentive or biased answers due to exhaustion, distraction, or time constraints. Addressing these limitations in future studies would contribute to more robust and nuanced insights into the complex dynamics of WFC among nurses.

The study's findings have several implications for nursing practice and healthcare policy. First, WFC reduces nurses' motivation and professional commitment, which can adversely affect organizational efficiency and increase turnover. Healthcare institutions should optimize work schedules, limit consecutive night shifts, and ensure adequate rest periods to mitigate fatigue. Second, resilience and stress management training tailored to nursing staff, combined with education about WFC, can enhance coping skills and reduce burnout. Third, organizations should implement stronger support mechanisms, including counseling, peer support, childcare facilities, flexible leave, mentorship programs, and formal recognition, to promote a supportive work environment. Finally, policymakers must enforce labor protections against excessive overtime and align compensation with workload and responsibilities. Collectively, these measures can enhance nurses' professional commitment, improve patient care quality, and promote sustainable healthcare workforce retention.

Conclusion

This study highlights the adverse relationship between WFC and nurses' professional commitment and efficiency. Based on these findings, it is crucial for healthcare administrators and nursing managers to identify nurses experiencing high levels of WFC and implement targeted supportive interventions such as flexible shift scheduling, stress management training, and family-friendly workplace policies. In addition, organizational strategies including on-site counseling services, mentorship programs, and equitable compensation -coupled with broader systemic reforms- can significantly enhance nurses' well-being, reduce burnout, and ultimately strengthen their professional commitment and overall performance.

Acknowledgment

The authors wish to sincerely thank the Deputy for Research for their guidance and support throughout this study. We are also deeply indebted to the dedicated nursing professionals; whose cooperation and commitment were invaluable in making this research possible.

Competing interests

The authors declare that they have no competing interests.

Abbreviations

Work-family conflict: WFC; Coronary Care Unit: CCU; Intensive Care Unit: ICU.

Authors' contributions

Data collection: M-J. A-Z, Data analysis: Z.R and Sh.H, Manuscript writing: M-J. A-Z. All authors read and approved the final manuscript. All authors take responsibility for the integrity of the data and the accuracy of the data analysis.

Funding

This research was carried out as part of a Master's thesis at Tehran University of Medical Sciences and did not receive any dedicated funding.

Role of the funding source

None.

Availability of data and materials

The data used in this study are available from the corresponding author on request.

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki. The research protocol received formal approval from the Ethics Committee (Ethics Code: IR.TUMS.FNM.REC.1402.091)

Consent for publication

By submitting this document, the authors declare their consent for the final accepted version of the manuscript to be considered for publication.

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How to Cite this Article:

Ahmadzadeh-Zeidi MJ, Rooddehghan Z, Haghani S. The relationship between work-family conflict and nurses' professional commitment in Iran, 2024: A cross-sectional study. *Nurs Midwifery Stud.* 2025;14(4):275-283. doi:10.48307/nms.2025.532173.1632