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Original Article

Work-Family Conflict in Nurses During the COVID-19 Pandemic

Masoomeh Imanipour[1], **Halimeh Kamali**[2*], **Zahra Razzaghi**[3]

[1]Nursing and Midwifery Care Research Center, Department of Critical Care, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran
[2]Department of Health in Disasters and Emergencies, School of Management and Medical Information Sciences, Kerman University of Medical Sciences, Kerman, Iran
[3]Department of Laser Application in Medical Sciences Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Abstract

Background: During the COVID-19 pandemic, nurses were praised as the main heroes of the fight against the disease, but pandemic conditions affected the balance between their work and family responsibilities. To this end, the present study aimed to explore the incidence of work-family conflict in nurses during the COVID-19 pandemic.

Methods: This descriptive cross-sectional study was conducted at COVID-19 referral hospitals in Mazandaran Province, Iran, in 2021. The participants were 200 nurses who were selected using convenience and purposive sampling. The data were collected using the Work-Family Conflict Scale (WAFCS), which was distributed and completed online. The collected data were analyzed with SPSS-16 software using descriptive and inferential statistics.

Results: Most of the participants were working as nurses for an average of seven years and had been caring for COVID-19 patients for at least 4-6 months until the time of data collection. The mean work-family conflict score was 78.80 ± 1.1. The data also showed that the severity of work interference with family (WIF) in both time and strain dimensions (83.81 ± 0.3) was significantly higher than the severity of family interference with work (FIW) (65.90 ± 0.3) in these two dimensions.

Conclusion: Nurses faced an imbalance between work and family functions during the COVID-19 pandemic. Since nurses are at the forefront of the fight against the pandemic, it is necessary to pay special attention to their working conditions and family life. Moreover, effective and practical solutions should be provided by managers to resolve work-family challenges.

Keywords: Work-family conflict, Nurses, Pandemic, COVID-19

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Introduction

Despite significant medical achievements in the last century, the risk of new infectious diseases is increasing in the world (1). The COVID-19 pandemic also spread as a new infectious disease in 2019 from Wuhan, China and quickly turned into a global pandemic (2). The outbreak of infectious diseases and pandemics, such as acute respiratory syndrome, Middle East respiratory syndrome, and H1N1 influenza, have always caused mental and emotional problems among healthcare workers, patients, and their family members (3). The rapid transmission and spread of pandemics put healthcare workers and nurses at greater risk (4) because they are on the front line of fighting the disease (2,5,6). In such circumstances, the members of the healthcare team are often praised as the main heroes in the fight against the disease, while they face family, social, and psychological challenges. However, the evidence shows that healthcare workers suffered from mental and emotional problems such as stress, anxiety, and depression during the critical conditions caused by the COVID-19 outbreak (7). Isolation, working in high-risk situations, and contact with infected people are the main causes of these problems (8). Moreover, in critical situations and pandemics when a disease spreads rapidly, such as during the COVID-19 outbreak, some nurses resign and withdraw from work (9) and some fail to provide healthcare services as they develop the disease. Thus, other nurses are faced with a high workload due to the shortage of medical staff (10). While having to play a role as a health system professional and carry a lot of burden, nurses should also play their role as effective members of their families. Hence, they face challenges in balancing their work-family responsibilities (11) due to the high workload and the risk of virus transmission among family members (12). Nurses are often worried about being carriers of disease and infecting their family

*Corresponding Author: Halimeh Kamali, Email: Halimehkamali93@gmail.com

members. As a result, they avoid interacting with family members (13).

Family and work are two important aspects of adult life (14) and they have mutual effects on each other. When a problem is experienced in the workplace, it unconsciously affects people's behavior at home, and vice versa (15). Indeed, the lack of compatibility between performing functional roles in the workplace and the family environment causes work-family conflict (14,16). This means that playing a role on one side causes problems in playing a role on the other side (15). Work-family conflict in nurses is inevitable due to exhausting work conditions such as strenuous shifts, long working hours, heavy responsibility for patient care, physical-psychological pressures, etc (4,11). Studies have shown that nurses experience a higher level of work-family conflict than other healthcare team staff, so more attention should be paid to work-family conflict in nursing (4). This conflict in nurses can cause problems such as depression, job dissatisfaction, economic problems (13,17), and consequences in their clinical practice (11). The pressures caused by work-family conflict can lead to the resignation of nurses and cause a shortage of staff (4). Besides, nurses' concern about the mismatch between family and work responsibilities is an obstacle to the desire to work and reduces the recruitment of new nursing staff. Such consequences affect the quality of patient care and even the safety of patients (4). Thus, it is essential to pay attention to the work-family conflict in nurses to control these negative consequences and reduce the conflict, especially in some critical situations such as the outbreak of an epidemic or pandemic.

During the COVID-19 pandemic, like other pandemics, nurses were fully involved in fighting this disease and providing care services to affected patients, and in fact, nurses were the main players in providing healthcare services (18). Accordingly, the human community needs the effective services of nurses as important members of the health service system in such critical conditions (4). Furthermore, it is necessary to pay special attention to this group of healthcare staff and examine the problems and negative consequences of working in the pandemic conditions of an infectious disease from different dimensions to provide preventive or supportive rehabilitation solutions for them. One of these dimensions is the imbalance between work and family functions and roles in nurses, which can create negative consequences for the patient, the nurse, and the nurse's family. To this end, the present study aimed to investigate the work-family conflict in nurses during the COVID-19 pandemic. The findings from the present study can contribute to developing a measure of work-family conflict during health crises in nurses and help in devising effective and practical solutions to resolve this conflict in nurses.

Methods

This descriptive cross-sectional study was conducted on nurses working in COVID-19 referral hospitals in Mazandaran Province, Iran. The participants were 200 nurses working in the COVID-19 intensive care units. The nurses were selected through convenience and purposive sampling. The criteria for entering the study were a bachelor's degree or a higher degree in nursing, at least one year of clinical work experience before the pandemic, at least three months of continuous work in the COVID-19 ward, and the nurse's non-infection with COVID-19. The exclusion criterion was a positive Cardiopulmonary resuscitation (CPR) test in the nurse during data collection. The data were collected using a demographic information questionnaire and the Work-Family Conflict Scale (WAFCS) (19). WAFCS has 22 items and evaluates 4 dimensions of work-family conflict: (1) time-based work interference with family (WIF) (items 1, 2, 3, 4, and 5), (2) strain-based WIF (item 6, 7, 8, 9, 10, and 11), (3) time-based family interference with work (FIW) (items 12, 13, 14, 15, and 16), and (4) strain-based FIW (items 17, 18, 19, 20, 21, and 22) (16,19). The minimum and maximum scores for the two subscales of strain-based WIF and strain-based FIW are 6 and 30, respectively. Moreover, the minimum and maximum scores for the two subscales of time-based WIF and time-based FIW are 5 and 25, respectively. The items are scored on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), with higher scores indicating a greater level of conflict. In this study, the Persian version of the scale was used. Mozafari et al assessed and confirmed the psychometric properties of the scale (alpha > 0.9) (16). To ensure the staff's protection and safety, no one was allowed to enter the COVID-19 ward. Thus, the data were collected electronically. To do so, after obtaining ethical approval (IR.TUMS.VCR.REC.1399.221) from the Institutional Committee and obtaining official permits, the researcher visited three referral hospitals in Mazandaran Province. First, some explanations were provided about the objectives of the study and the research procedures to the hospital managers and supervisors of COVID-19 wards, and then the link to the electronic version of the instruments was provided to the supervisors of the wards to be completed by the nurses who met the inclusion criteria. In addition, the information related to the objectives of the study, ethical considerations, and the link to the questionnaires were placed on the notice board of the ward to be seen by nurses. Each of the nurses could complete the questionnaire if they wanted to after signing the informed consent form. A total of 422 nurses completed the questionnaires from June 10 to September 12, 2021. However, 222 nurses who did not meet the inclusion criteria were excluded from the study (66% of nurses developed COVID-19, 18% had work experience of less than one year, and 16% worked for less than three

months in the COVID-19 ward). Finally, the data from 200 questionnaires were analyzed with SPSS-16 software using descriptive and inferential statistics. Mean and standard deviation were used to describe quantitative data, and frequency and percentage were used to describe qualitative data. The normality of the data was confirmed using the Kolmogorov-Smirnov test.

Results

Most of the participants in this study were female (78.5%), married (60.5%), in the age range of 20-50 years, and working as nurses for an average of seven years. Besides, 53.5% of the nurses were caring for COVID-19 patients for 4-6 months until the data collection time (Table 1).

The findings showed that the mean scores for the WIF in both dimensions of time and strain were significantly higher than the mean scores for FIW. Furthermore, the data confirmed a relatively high WIF among the participants (Table 2).

The data in this study also revealed that the mean score for time-based WIF was 81.14 ± 0.2 and the mean score for strain-based WIF was 69.37 ± 0.2. Moreover, the mean score for time-based FIW (61.74 ± 0.4) was greater than the mean score for strain-based FIW (57.12 ± 0.3) as shown in Table 3.

Discussion

The findings from the present study showed that during the COVID-19 pandemic, nurses faced work-family conflict. Similarly, Alhani and Oujiyan reported that the level of WIF in nurses is significantly higher than FIW (15). Moreover, Chong et al. found that nurses are more likely to suffer from work-family conflict for reasons such as working in unusual conditions, insomnia and problems caused by it, being in contact with patients, painful situations, and problems caused by taking on the roles of father and mother (20).

The conflict between two important aspects of life, i.e., work and family, is considered one of the most important global problems in nursing (4), and compared to other members of the healthcare team, nurses experience more work-family conflict and as a result, they tend to suffer from negative psychological consequences (4,14,16) including the feeling of extreme vulnerability, helplessness, loss of control, uncertainty, and threat (21). In addition, the COVID-19 pandemic was associated with negative consequences for nurses and healthcare staff. Accordingly, Khanal et al. showed that during the COVID-19 pandemic, nurses suffered from depression (37.5%) and insomnia (33.5%) (22). Chong et al. also reported that nurses complained of sudden disruption in work and normal life following the outbreak of respiratory pandemics (21). Besides, Koh et al showed that nurses in pandemic conditions experience work stress (56%) and a high workload (53%). Moreover, 54% of the nurses had

Table 1. The participants' demographic and occupational characteristics

Variable	Categories	BNo. (%)
Age	Mean	31.6 ± 67.10
	20-30	106 (53.0)
	31-40	56 (28.0)
	41-50	38 (19.0)
Gender	Male	43 (21.5)
	Female	157 (78.5)
Marital status	Married	122 (61.0)
	Single	77 (38.5)
	Other (divorced/widow)	1 (0.5)
Education	Bachelor's degree	164 (82.0)
	Master's degree	32 (16.0)
	Ph.D.	4 (2.0)
Spouse's occupation	Employee	79 (64.8)
	Self-employed	30 (24.5)
	Unemployed	13 (10.7)
Head of the family	Yes	26 (13.0)
	No	174 (87.0)
Number of family members	1-4	165 (82.5)
	More than 4	35 (17.5)
Having children	Yes	92 (75.4)
	No	30 (24.6)
Job experience (year)		7.5 ± 44.21
Employment	Human resource plan	56 (28.0)
	Contractual/corporate	42 (21.0)
	Official/temporary	102 (51.0)
Position	Nurse	135 (67.5)
	Shift manager	40 (20.0)
	Nursing supervisor	25 (12.5)
Working hours per month	≥200	122 (61.0)
	<200	78 (39.0)
Working in another healthcare center	Yes	14 (7.0)
	No	186 (93.0)
Work shift	Rotating	156 (78.0)
	Morning	36 (18.0)
	Evening	2 (1.0)
Workplace	COVID-19 emergency department	47 (23.5)
	COVID-19 ICU	66 (33.0)
	General COVID-19 ward	86 (43.0)
	COVID-19 operating room	1 (0.5)
Caring for COVID-19 patients (month)	1-3	91 (45.5)
	4-6	107 (53.5)
	>6	2 (1.0)

Table 2. The total WIF and FIW scores

Variable	Time	Strain	Total score
FIW	61.74 ± 0.4	57.12 ± 0.3	65.90 ± 0.3
WIF	81.14 ± 0.2	69.37 ± 0.2	83.81 ± 0.3
Total score			78.80 ± 1.1

Table 3. Time-based and strain-based WIF and FIW

Time-based WIF		**Time-based FIW**	
Items	**Mean ± SD**	**Items**	**Mean ± SD**
I have to change plans with family members because of the demands of my job.	80.23 ± 0.4	I would put in a longer workday if I had fewer family demands.	93.20 ± 1.2
Job demands keep me from spending the amount of time I would like with my family.	82.22 ± 0.4	My family demands interrupt my workday.	92.19 ± 1.7
Job responsibilities make it difficult for me to get family chores/errands done.	94.91 ± 0.3	Family demands make it difficult for me to take on additional job responsibilities	88.19 ± 1.6
To meet the demands of my job, I have to limit the number of things I do with family members.	70.23 ± 0.16	I spend time at work making arrangements for family members.	54.05 ± 0.5
My job prevents me from attending appointments and special events for family members.	81.09 ± 0.13	Family demands make it difficult for me to have the work schedule I want.	16.03 ± 0.9
Strain-based WIF		**Strain-based FIW**	
After work, I have little energy left for the things I need to do at home.	59.28 ± 1.3	When I am at work, I am distracted by family demands.	16.10 ± 1.1
I think about work when I am at home.	95.82 ± 0.3	Things going on in my family life make it hard for me to concentrate at work.	65.09 ± 1.7
I do not listen to what people at home are saying because I am thinking about work.	99.52 ± 0.3	Events at home make me tense and irritable on the job.	81.14 ± 1.2
After work, I just need to be left alone for a while.	95.86 ± 0.8	Because of the demands I face at home, I am tired at work.	74.12 ± 1.3
My job puts me in a bad mood at home.	59.08 ± 1.3	I spend time at work thinking about the things that I have to get done at home.	71.14 ± 1.4
The demands of my job make it hard for me to enjoy the time I spend with my family.	75.00 ± 1.4	My family life puts me into a bad mood at work.	41.08 ± 1.2

to do something that "they do not normally do" and 36% had to work overtime (1). Hence, continuous exposure to such difficult conditions undoubtedly affects the quality of work and patient care (4,23). Namdari et al. examined the effect of work-family conflict on the quality of patient care and found that work-family conflict negatively affects the quality of patient care (4), while in pandemics such as COVID-19, it is important to provide quality healthcare and treatment services (23).

Most of the participants in this study were female. Indeed, the increased number of working women, the increased ratio of women to men in the labor market, the presence of women in management and key positions in universities and government jobs, and the general change in the composition of the workforce along with technological developments and the change in working procedures of organizations changed the working conditions and structure in general. The increase in women's employment also led to the formation of families in which both men and women work. Similarly, the increase in single-parent families and the expansion of nuclear families have disrupted the balance between work and family (24). However, Beigi et al. showed that men experience more family-work conflict than women. A comparison of demographic factors also showed that gender is negatively associated with family-work conflict (24).

Many nurses are currently facing challenges in balancing their professional and family roles. Furthermore, following the spread of pandemics, not only nurses but also their family and social life are negatively affected by the pandemic conditions. The findings of the present study also showed a relatively high prevalence of work-family conflict. Although the mean score of family-work conflict was lower than work-family conflict, this difference could be attributed to the Iranian family structure and cultural background. Since the family in Iran is considered a source of support, family members in Iran are in constant contact with each other through phone calls and meetings. Moreover, by accepting more family responsibilities and giving more priority to them, there is less family-work conflict in Iranian families.

The data in the present study also showed that time-based WIF and time-based FIW were higher among nurses compared to strain-based WIF and strain-based FIW. However, Hesabi et al showed that strain-based WIF is more intense than other dimensions (time, strain, and behavior) (20). These conflicting findings can be attributed to the COVID-19 pandemic. The researcher was working as a nurse in the COVID-19 ICU during the outbreak of this disease in the country and experienced such conflicts.

The participants in this study also reported that their job responsibilities made it difficult for them to fulfill their family duties. This is to argue that job requirements prevent performing family duties due to working long shifts in long hours, high workload, taking care of countless patients, and meeting a wide range of family and job needs (4). Hence, working constantly in such difficult and stressful conditions may lead to job

dissatisfaction and even the desire to leave the job in the future (13). However, Namayandeh et al showed that job satisfaction is more associated with lower levels of work-family conflict (25). As such, work support policies such as flexible work schedules and instrumental support such as child and elder care services, fringe benefits, and emotional support such as expressing personal problems to one's supervisor or co-worker can be useful to increase job satisfaction and thus reduce work-family conflict (25).

Work-family conflict is an important concern for individuals and organizations because high work-family conflict even leads to a decrease in family satisfaction (25). Namayandeh et al found that higher levels of family satisfaction lead to elevated levels of work-family conflict and family-work conflict (25). Therefore, supportive family policies such as adopting an equal gender attitude, sharing housework, and having flexibility in roles at home may allow working women to feel a sense of belonging and closeness to family members and also change some strict family rules such as traditional thinking (25). In addition, Alhani and Oujiyan showed that work-family conflict in nurses also negatively affects the quality of life of nurses (15). Thus, nursing managers need to provide comprehensive and effective solutions to enhance the quality of life of nurses.

Overall, the findings from the present study confirmed that the negative consequences of COVID-19 create many challenges for nurses including work-family conflicts. Thus, nursing managers and relevant officials must pay special attention to nurses as the core members of healthcare teams in difficult pandemic conditions and provide adequate support to them. If managers can provide more support to their staff and get more organizational support, job burnout and, as a result, work-family conflict will decrease, and consequently, their performance will improve.

This study was conducted with some limitations that may guide future studies. First, a low response rate and the data collection from only one province restricted the generalizability of the findings. Moreover, the findings cannot be applied to nurses working at private hospitals. Accordingly, the results cannot be generalized to the entire nursing community. In addition, most of the participants in this study were female nurses and had an average of fewer than ten years of work experience. Thus, future studies need to address the relationship between individual and occupational factors of nurses because it helps to generalize the findings. This study also needs to be replicated with more heterogeneous populations such as ethnic groups with more religious and occupational diversity, and different cultural values. The data in this study were collected using a self-report measure. Thus, the findings could be affected by methodological biases. Such shortcomings can be resolved in future studies by collecting longitudinal data or using mixed data collection methods. Finally, to resolve the work-family conflict, interventional programs should be designed and executed in future studies. Furthermore, since this study was conducted in the first year of the COVID-19 pandemic, future studies can use qualitative methods to explore work and family challenges caused by the COVID-19 pandemic and offer effective solutions to cope with these conflicts and challenges.

Conclusion

The present study showed that during the COVID-19 pandemic, nurses faced an imbalance between workplace responsibilities and roles and family functions and experienced work-family conflict more than family-work conflict. Work-family conflict has negative effects on nurses' lives, which ultimately leads to an increase in the number of nurses who quit. Thus, hospital officials and managers need to pay more attention to nurses during health crises such as epidemics and pandemics because they often tend to go through work-related conflicts and it is necessary to provide some facilities such as psychological support, welfare, recreation, and so on to facilitate working conditions for nurses as much as possible so that they can balance their occupational roles and responsibilities and their family functions and promote their mental health, which will affect the quality of care provided by them. Moreover, developing programs for career enrichment and holding workshops on time management and conflict management during pandemics can help nurses create a balance between work and family.

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Authors' Contribution

Conceptualization: Masoomeh Imanipour.
Data curation: Halimeh Kamali.
Formal analysis: Zahra Razzaghi.
Funding acquisition: Masoomeh Imanipour.
Investigation: Halimeh Kamali.
Methodology: Halimeh Kamali.
Project administration: Halimeh Kamali.
Resources: Halimeh Kamali.
Software: Zahra Razzaghi.
Supervision: Masoomeh imanipour.
Validation: Halimeh Kamali.
Visualization: Halimeh Kamali.
Writing–original draft: Halimeh Kamali.
Writing–review & editing: Halimeh Kamali.

Competing Interests

The authors declared no conflict of interest.

Ethical Approval

This study was approved by the Ethics Committee of Tehran

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