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Predictors and Outcomes of Work-family Conflict among Nurses in Mbujimayi, Democratic Republic of Congo

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Abstract

Work-family conflict, an important issue in nursing management, has been widely studied around the world. Over the past 20 years, many hospitals and care institutions have been faced with an increasing demand for healthcare due to an ageing population. The purpose of this study is to to determine the prevalence and factors Associate with the occurrence of WFC among nurses in the town of Mbujimayi.

A cross-sectional study was conducted in 9 referral hospitals in the town of Mbuji-Mayi. Data were collected using a questionnaire, including items related to nurses' demographic characteristics, the WFC questionnaire.

Our study indicates that the prevalence of work-family conflict among nurses was 49.8%. Nurses' age [ORa: 12.13(1.54-2.93)], marital status [ORa: 1.54(1.15-2.07)], hospital categories[ORa:1.59(1.15-2.21)], work experience in years [ORa: 3.20(2.16-4.75)], occupancy status[ORa: 1.38(1.03-1.85)] and having an additional activity[ORa: 1.38[1.03-1.85]) predicted work–family conflict.

Given the extent of work-life conflict among nurses and its negative repercussions on both their health and the quality of their care, preventive measures aimed at improving the work-life balance should be introduced in the care environment.

Keywords: Work-Family Conflict, Predictors, Nurses, DRC

Introduction

Various types of literature show that Work-family conflict (WFC) is an essential factor affecting the physical and mental health of workers. Work-family conflict (WFC) has been defined as "a type of inter-role conflict in which the pressures of work and family are not compatible in some respects". (Mache *et al*., 2015) [15]. The definition of WFC implies a two-way relationship between work and family life, so that work can interfere with family life and family life can also interfere with work demands, i.e. between family and work.

Work-family conflict (WFC) is an important indicator of healthy lifestyle and employee job satisfaction, and is often associated with potential health and socio-economic consequences (Beyramijam *et al*., 2020) [3]. In recent years, family life has undergone radical changes. Increased family expenditure has pushed more family members into the labour market, including mothers. Work can interfere with family responsibilities and vice versa. Conflict arises when the demands of one role make it difficult to fulfil another (AlAzzam *et al*., 2017) [1]. Some authors have found that various stress factors linked to the family role preceded work-family conflicts, in addition to personality characteristics (internal locus of control, negative affectivity). (Karabay *et al*., 2016; Miller *et al*., 2022) [11, 16].

Work-life interference has been ranked as one of the top 10 workplace stressors (Gao, Shi, & Wang, 2013). In addition, persistent pressure from work and family can have undesirable effects on different domains. In the work domain, WFC is negatively associated with job performance, job satisfaction, organisational commitment, intention to stay in work (Cao *et al*., 2000; Tran *et al*., 2023) [4, 22] and quality of care (Dilmaghani *et al*., 2022) [7].

In healthcare settings, employees are exposed to multiple professional constraints, including high workloads, atypical working hours and often deteriorating working conditions (Rhnima *et al*., 2023) [19]. This often makes it difficult for healthcare workers to reconcile work and private life (Lembrechts *et al*., 2014) [14].

This is why WFC is one of the sources of stress most specific to the nursing profession. The negative impact of this conflict on nurses' mental and physical health has been reported (Rassas *et al*., 2020) [18]. However, very few studies have been conducted to identify the predictors of WFC in healthcare settings, and in particular among nurses in the Democratic Republic of Congo. In this context, we conducted this study to determine the prevalence and factors Associate with the occurrence of WFC among nurses in the town of Mbujimayi.

Methods

Design and setting

This cross-sectional study was conducted in 2023 in 9 referral hospitals in the town of Mbuji-Mayi (province of Kasaï Oriental) during the period from 31 July to 15 August 2023. These hospitals are also obliged to provide medical support and services in critical situations, which intensifies the professional pressure on nurses. We therefore randomly selected the general referral hospitals located in the town of Mbujimayi.

Participants in the study

The study population consisted of all nurses working in hospitals in the town of Mbujimayi. The sample size was calculated using Cochran's formula with a confidence level of 95% and a significance level of 0.05. Taking into account the probability of dropping out of the sample and questionnaires containing incomplete information, the questionnaires distributed exceeded the calculated sample size by 30% (n=1085). The inclusion criteria for the sample were all nurses employed in the target hospitals and with at least one year's experience, while for the exclusion criteria we eliminated incomplete information in the questionnaires and staff who did not consent to participate in the study.

Data collection

The data collection tool for this study was a two-part questionnaire (demographic information and WFC and questionnaires). After obtaining the necessary authorisations and coordinating with the selected hospitals, the investigators were sent to the hospitals to collect the data. Data was collected by means of structured face-to-face interviews, using a pre-tested questionnaire configured on the Open Data Kit (ODK Collect). A preliminary pilot study was conducted on 30 nurses living in areas not covered by the study, with a Cronbach's alpha coefficient for the internal consistency reliability of the questionnaire of 0.84.

The WFC questionnaire by Carlson *et al.* (Carlson, D. S., Grzywacz, J. G., Ferguson, M., Hunter, E. M., Clinch, C. R., Arcury, 2011) [5] was used in this study and this questionnaire includes 18 questions and 6 dimensions including time-based Work-Family Conflict (Questions 1–3), time-based Family-Work Conflict (Questions 4–6), Work-Family Conflict based on frictional power (Questions 7–9), Family-Work Conflict based on frictional power (Questions 10–12), Work-Family Conflict based on behavior (Questions 13–15), and Family-Work Conflict based on behavior (Questions 16–18). The questionnaire was scored based on a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The score obtained is between 18 and 90, and a score above 45 indicates Work-Family Conflict.

Data Analysis

The collected data were analyzed using the Statistical Package for Social Sciences (SPSS) (Version 26). The WFC scores of nurses in different groups were compared by Student's t-test or ANOVA, and a separate variance estimation t-test and the Welch test were conducted when the homogeneity test of variances was significant. The existence of work-family conflict (WFC) was defined when the score was above the median of 43.

Associations between the independent variables and the primary endpoints (existence of work-family conflict) were tested using the t-test or chi-square test, as appropriate. A stepwise ascending Wald analysis was performed to define the variables to be included in the final logistic regression model, based on the results of the univariate models, and was complemented by an analysis of the predictive power of the model using the receiver operating characteristic (ROC) curve. All comparisons were two-tailed, and the significance threshold was p-values.

Ethical Approval

All nurses were informed of the objectives of the study and agreed to and signed a consent form prior to participation. The study was approved by the Ethics Committee of the University of Lubumbashi (approval letter No. UNILU/CEM/226/2023).

Results

Work and Family Conflict Prevalence

Descriptive statistics for the work-family conflict scale showed that work-family conflict was present in 49.8% (510/1024) of cases among nurses.

Table 1: Participants' demographic and Work-Family Conflict characteristics

Characteristics	Percentage	Mean ± SD	p value
Age			
< 40	62.6	47.7±11.9	**0.000**
≥ 40	37.4	44.6±10.6	
Sex			
Male	56.8	46.1±11.9	**0.22**
Female	43.2	47.0±11.1	
Marital status			
Married	73.3	45.9±11.3	**0.007**
Single	26.7	48.1±12.2	
Religion			
christian	80.3	46.5±11.5	**0.87**
non-Christian	19.7	46.6±11.8	
Hospital categories			
Public	22.5	44.7±12.5	**0.008**
Private	77.5	47.0±11.2	
Work experience in years			
≤ 10	82.6	46.3±11.8	**0.10**
> 10	17.4	47.7±10.4	
Educational status			
Advanced practice nurse	12.2	45.1±12.7	**0.20**
practice nurse	53.5	46.4±11.0	
Registered nurse	34.3	47.2±11.9	
Matrimonial regime			
Monogamous	84.8	45.9±10.9	**0.07**
Polygamous	15.2	47.9±14.5	

Occupancy status			
Lodger	69.7	46.0±11.4	**0.03**
House owner	30.3	47.7±11.7	
Children responsibility			
No	17.9	48.1±11.7	**0.05**
Yes	82.1	46.2±11.5	
having an additional activity			
No	43.0	44.6±9.8	**0.000**
Yes	57.0	47.9±12.6	

In the present study, more than half of the participants (62.6%) were under 40 years of age and had a statistically significantly higher mean WFC score (47.7±11.9) than those over 40. Regarding marital status, 73.3% were married and it was the singles who had a WFC score of 48.1±12.2, relatively higher than those who were married. It should be noted that 77.5% of the participants came from private hospitals and these had a higher mean WFC score (47.0±11.2) than those from public hospitals (44.7±12.5). Regarding the occupation status of the participants, 69.7% were lodgers and had a score of less than 46.0±11.4, whereas it was 47.7±11.7 for the house owner. It should be noted that 57.0% of the participants who had an additional activity had a higher WFC score (47.9±12.6) than those who did not (Table 1).

Table 2: Associations between work-family conflict and socio-demographic characteristics of participants

Characteristics	Existence of work-family conflict		OR [95% CI]	p
	Yes	No		
Age				
< 40	341(53.2)	300(46.8)	**1.44[1.12-1.86]**	**0.005**
≥ 40	169(44.1)	214(55.9)		
Sex				
Female	229(51.8)	213(48.2)	**1.15[0.90-1.48]**	**0.26**
Male	281(48.3)	301(51.7)		
Marital status				
Single	151(55.3)	122(44.7)	**1.35[1.02-1.79]**	**0.03**
Married	359(47.8)	392(52.2)		
Religion				
Non-Christian	109(54.0)	93(46.0)	**1.23[0.90-1.68]**	**0.19**
christian	401(48.8)	421(51.2)		
Hospital categories				
Private	422(53.1)	372(46.9)	**1.83[1.36-2.47]**	**<0.0001**
Public	88(38.3)	142(61.7)		
Work experience in years				
> 10	109(61.2)	69(38.8)	**1.75[1.26-2.44]**	**0.001**
≤ 10	401(47.4)	445(52.6)		
Educational status				
Advanced practice nurse	61(48.8)	64(51.2)		**0.64**
practice nurse	267(48.7)	281(51.3)		
Registered nurse	182(51.9)	169(48.1)		
Matrimonial regime				
Polygamous	66(51.6)	62(48.4)	**1.14[0.80-1.66]**	**0.51**
Monogamous	345(48.4)	368(51.6)		
Occupancy status				
House owner	168(54.2)	142(45.8)	**1.29[0.99-1.68]**	**0.06**
Tenant	342(47.9)	372(52.1)		
Children responsibility				
No	99(54.1)	84(45.9)	**1.23[0.90-1.70]**	**0.20**
Yes	411(48.9)	430(51.1)		
Having an additional activity				
Yes	325(55.7)	259(44.3)	**1.73[1.35-2.22]**	**<0.0001**
No	185(42.0)	255(58.0)		

Table 2 showed that Age (OR: 1.35[1.05-1.74]), marital status (1.43[1.08-1.88]), hospital categories (OR: 1.80[1.32-2.44]), work experience in years (OR: 1.94[1.40-2.70] and Having an additional activity(OR: 1.83[1.43-2.37]) were significantly associated to the existence of work-family conflict among nurses.

Table 3: Predictors of Work and Family Conflict among nurses

Characteristics	ORa [95% CI]	p
Age (< 40 vs≥ 40)	2.06[1.51-2.81]	<0.0001
Marital status(Single vs Married)	1.41[1.06-1.89]	0.020
Hospital categories (Private vs Public)	1.61[1.18-2.22]	0.003
Work experience in years(> 10 vs ≤ 10)	2.74[1.86-4.04]	<0.0001
Occupancy status (House owner vs Lodger)	1.36[1.02-1.82]	0.04
Having an additional activity (Yes vs No)	1.70[1.31-2.21]	<0.0001

In logistic regression, age (< 40 vs≥ 40) [ORa: 12.13(1.54-2.93)], marital status (Single vs Married) [ORa: 1.54(1.15-2.07)], hospital categories (Private vs Public) [1.59(1.15-2.21)], work experience in years(> 10 vs ≤ 10) [ORa: 3.20(2.16-4.75)], occupancy status (House owner vs Tenant) [ORa: 1.38(1.03-1.85)] and having an additional activity (Yes vs No) (ORa: 1.38[1.03-1.85]) were known to predict the existence of work-family conflict among nurses (Table 3).

Discussion

The aim of this study was to determine the prevalence and factors Associate with the occurrence of WFC among nurses in the town of Mbujimayi. In the present study, the prevalence of WFC among nurses was 49.8%. Our results corroborate with Egyptian studies which found a prevalence of WFC at 46.7% (Eshak *et al.*, 2018) [9] while Japanese studies reported prevalence in ranged from 15.2% to 54.0% (Koura *et al.*, 2020; Shimazu *et al.*, 2013) [13, 20].

Multivariate analysis showed that ages below 40 years [aOR: 12.13(1.54-2.93)] were known to predict the existence of work-family conflicts among nurses. In the study conducted by Yıldırımalp *et al.* (2014) [23], it was determined that nurses in the 33-40 age group experienced a higher level of work-family conflict than nurses in the 18-25 and 26-32 age groups, and nurses aged 41 and above compared to nurses in the 26-32 age group (Yıldırımalp, S., Oner, M., & Yenihan, 2014) [23]. In the study conducted by Mjoli *et al.*, a significant difference was noted between age and work/family conflict. In a study carried out by Karakurt *et al.*, the 20-25 age group experienced more work-family conflicts than nurses in other age groups (Karakurt *et al.*, 2023) [12]. One possible interpretation of the higher levels of anxiety observed in nurses under 40 is that at this stage of life they may have already established emotional stability

and started raising a family, resulting in increased family obligations that may contribute to their anxiety, such as caring for children and elderly family members. At the same time, professional development is also at a critical period for them, making it difficult to reconcile family and professional roles, and therefore more likely to experience anxiety.

A significant association between marital status and work-family conflict was also found; single nurses had 1.54 times the risk of having work-family conflict than those who were married [ORa: 1.54(1.15-2.07)]. Polat *et al*. also reported like our study that single nurses experience work conflict more often than married nurses (Polat, 2018) [17]. The hypothesis being that, since married nurses have more social support resources, they have fewer WFC than single nurses. An organisational culture conducive to work-family balance for employees with family responsibilities results in less tension and discomfort associated with work and family roles. But this did not correspond to the results of certain studies which revealed a predominance of work-family conflict (Dilmaghani *et al*., 2022; Rassas *et al*., 2020) [7, 18].

With regard to the hospital environment, nurses working in private hospitals had 1.61 times the risk of developing work-family conflict. Our results confirm those of other authors (Susanti, Ratna Indrawati, 2022) [21].

Nursing is considered to be an intrinsically demanding profession. Not only are nurses exposed to various stressors at work, such as pain and death, high emotional expectations from patients, demanding and atypical working hours and work overload, but they also often lack adequate resources to cope with these stressors. In many developing countries, the demand for nurses is exacerbated by a shortage of nurses due to factors such as ageing, low salaries and limited career prospects for nurses (Asiedu *et al*., 2018) [2]. This can be explained by the high demand for labour in private hospitals. Labour demand is one of the main indicators of work-family conflict (Greenglass *et al*., 2003) [10]. Work demand is highly dependent on the nature of the work. Each employee has an identical role that is directly linked to their job. Unpredictable working hours, working schedules, excessive workloads and overtime are all components of work demand. These work characteristics can limit the time available for workers' family responsibilities. Consequently, disparities may arise as a result of restrictions linked to the demand for work.

Nurses who responded with additional occupations reported greater work-family conflict than their counterparts who did not. Conflicts within the family also affect behaviour at work. When a person takes on more than one role, and if one of these roles requires a lot of attention, this will lead to multiple role conflicts. Role conflict occurs when an individual is faced with a situation where there are two or more roles, one of which may interfere with the role of the other (Dwi Anggraini *et al*., 2021) [8]. The recourse to extra work can be explained by the low wages that these nurses can receive. Given that they have to cover the various household expenses, they are obliged to seek additional employment. It should be noted that higher pay may be linked to lower work-family conflict, but higher pay is also strongly associated with higher employment status and more responsibility (Chung & van der Lippe, 2020) [6].

The main limitation of this study is that the survey was conducted in hospitals in the town of Mbujimayi and the results may not be generalizable to all hospitals in the DRC health system. Finally, given the cross-sectional nature of our study, causality cannot be determined.

Conclusion

This study is one of the first to investigate work-family conflict among nurses in the town of Mbujimayi. Our results confirmed that 49.8% of nurses experienced conflict between work and family. The results highlighted the various factors predictive of the occurrence of work-family conflict among nurses. Thus, organisational measures to address work-family conflict in nurses should take into account the different predictors identified, particularly those that are modifiable. Nurses' professional outcomes and quality of care can be improved by using empirical measures to effectively resolve work-family conflict.

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Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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