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Workaholism and family interaction among nurses

Adição ao trabalho e interação familiar em enfermeiros

Elisabete Maria das Neves Borges (https://orcid.org/0000-0002-6478-1008) [1]
Carlos Alberto da Cruz Sequeira (https://orcid.org/0000-0002-5620-3478) [1]
Cristina Maria Leite Queirós (https://orcid.org/0000-0002-8045-5317) [2]
Maria Pilar Mosteiro-Díaz (https://orcid.org/0000-0002-3375-9334) [3]

Abstract *This study aims to identify the prevalence of workaholism and work-family interaction, their relationship and their variation according sociodemographic and occupational characteristics among nurses. A quantitative, descriptive, correlational and transversal study was conducted with a sample of 839 Portuguese nurses. Regarding workaholism, 27% of workaholic nurses were identified, scoring a higher mean value for excessive work. For work-family interaction, the dimensions showing the highest mean values were the negative work-family interaction and the positive family-work interaction. The variables identified as significant predictors of workaholism were the work-family interaction (39%), occupational variables (10.6%) and sociodemographic variables (1.2%). Among the occupational and professional variables, the women, age equal or less than 37 years and perception of stressful work, were highlighted. The confirmation of workaholism in nurses, as well as its predictive variables are significantly important for professionals and organizations to better understand the impact of this phenomenon, particularly in mental health and to encourage the development of programmes aiming to promote health at the workplace.*

Key words *Workaholism, Work addiction, Family conflict, Nursing, Mental health*

Resumo *O objetivo deste estudo foi identificar a prevalência da adição ao trabalho, os níveis de interação trabalho-família e a relação destes com características sociodemográficas e laborais em enfermeiros. Estudo quantitativo, descritivo, correcional e transversal numa amostra de 839 enfermeiros de Portugal continental. Relativamente à adição ao trabalho, identificaram-se 27,1% de enfermeiros adictos, com valor médio superior no trabalho excessivo. No que respeita à interação trabalho-família, as dimensões com médias superiores foram a interação negativa trabalho-família e a interação positiva família-trabalho. As variáveis identificadas como preditores significativos da adição ao trabalho foram a interação trabalho-família (39%), as variáveis laborais (10,6%) e as sociodemográficas (1,2%). Das variáveis laborais e profissionais salienta-se o sexo feminino, idade igual ou inferior a 37 anos e a perceção de trabalho stressante. A confirmação deste fenómeno em enfermeiros, assim como, das variáveis que o podem potenciar, possibilita ao profissional e às organizações, uma maior consciencialização dos seus impactos, nomeadamente na saúde mental incentivando o desenvolvimento de programas que visem a promoção de saúde no local de trabalho.*

Palavras-chave *Dependência, Trabalho, Conflito familiar, Enfermagem, Saúde mental*

[1] Escola Superior de Enfermagem do Porto, Centro de Investigação em Tecnologias e Serviços de Saúde. Rua Dr. António Bernardino de Almeida. 4200-072 Porto, Portugal. elisabete@esenf.pt
[2] Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto. Porto, Portugal.
[3] Facultade de Medicina e Ciências da Saúde, Universidad de Oviedo. Asturias, Espanha.

Introduction

Work is a significant part of people's life. Many organizations have strived to understand the impact of work in the quality of life of workers and their families, organizations, and the quality and safety of care provided. In 2017, the International Labour Organization presented the Safety and Health at Work objective as part of the Decent Work and the 2030 agenda for sustainable development[1].

Recognizing the importance of work-life balance, the Eurofound identifies intensity, regularity, flexible work schedules, support from the administration and colleagues, as cardinal factors for achieving this balance[2]. In 2019, this organization also called attention to the new upcoming challenges concerning increasing ageing of the population and prolonged active life at work worldwide[3]. Similarly, the development and the increasing innovation in eliciting digital technologies have led to labour changes increasing connectedness among workers[4]. All these related factors, such as work overload, work pressure and competitiveness, role conflicts and the unpredictability of events (like the current outbreak of COVID-19 pandemic), characterize many of the work environments, with significant impact on family relationships[5-7].

Among many other professionals, nurses are often exposed to harmful work environments, and these professionals experience particular situations related to the nature of a highly demanding and stressful profession, both at physical and emotional levels, affecting health, family interaction and quality of care delivery[8-10].

The phenomenon of workaholism has also been found in nurses, with high risks for their psychological and physical health[11-13]. Workaholism is characterized by obsessive behaviour[14] and literature has put forward some theoretical models aiming to its conceptualization, namely, the Affection-cognition-behaviour[15], the Role Conflict[16] and the Personality and Inducements[17]. Affection-cognition-behaviour is associated with the dimensions of affection, cognition and behaviour, and is evidenced when the worker enjoys his/her work, experiences some type of anxiety when not engaged in work and is somewhat over-committed, nevertheless, finds it satisfying. The role conflict appears as a facilitator, and according to its authors, workaholism is related to negative well-being and burnout. Finally, the Personality Traits and Inducements model, advocates that workaholism is a result of the interaction between personality traits, and personal and organizational inducements.

Moreover, some studies point out as consequences of this phenomenon, cardiovascular complications, sleep pattern disorders and increased levels of stress[18-19], the burnout syndrome and secondary traumatic stress[14,20], mental health problems[21] and changes in the family relationship[22-24].

Early studies on the work-family relationship focused on the difficulties of interaction and the negative side of the conflict[25]. When addressing these multiple inhibiting factors in the management of professional and family roles, Authors called conflict to the negative interaction between work-family and family-work and identified these as related but independent constructs[26]. Moreover, the positive influence of work-family and family-work stems from the contribution of positive psychology. Some examples of this influence are the development of social skills[27] and social recognition[28]. Furthermore, authors identified the integrative perspective of the work-family interaction as a mutual influence, either negative or positive[29].

Although this latter perspective allows broader visibility, the literature has shown a greater predominance of negative relationships in the work-family interaction[30], associated with the work environment, such as ambiguity and role conflict[31], burnout[32], increased use of technology[33-34], job satisfaction[35] and absenteeism[36]. However, some other factors were found to be related to the family, such as the demand for household chores and the parental role[25,37-38].

Regarding nurses, the literature suggests the association between family conflict, depression and musculoskeletal disorders[39], quality of sleep[40], satisfaction and intention to leave[41], burnout[30,42-43], quality of care delivery[44], work context[45] and workaholism[46-48].

Thus, this study aims to identify the prevalence of workaholism and work-family interaction, their relationship and their variation according sociodemographic and occupational characteristics among nurses.

Methods

Study design and Participants

A quantitative cross-sectional and correlational study design was used. A convenience sample of Portuguese nurses with time profes-

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sional experience equal or more than one year was recruited. The Portuguese Order of Nurses supported this study by emailing a newsletter and making available a link to all registered nurses. A total of 839 nurses participated in the study, a valid sample considering the sample size of 729 nurses (100% response rate), for a 95% confidence level, accuracy of 3.25% and expected prevalence of workaholism of 28.3%. Data collection was performed between October and December 2019.

Instruments

For the data collection, a survey was developed, integrating a sociodemographic and professional questionnaire, the Dutch Work Addiction Scale[14,49] (DUWAS) to assess workaholism, and the Survey Work-Home Interaction NijmeGen[29-30] (SWING) to identify work-family interactions.

The 10-item DUWAS is assessed through a 4-point Likert scale (1-never to 4-everyday) and includes two dimensions: excessive work (five items, behavioural component) and compulsive work (five items, cognitive component). According to the authors, participants with scores equal to or higher than the 75th percentile in the combination of compulsive work and excessive work or in the score of addition to work were considered work addicts.[14]

SWING integrates 22 items with a 4-point Likert response option ranging from 0-never to 3-always, and four dimensions enabling to assess the work-family relationship in terms of direction (work-family and family-work) and quality of influence (negative and positive). It should be noted that the negative influence expresses the work-family conflict, according to its direction. For each dimension, high scores correspond to high levels of either positive or negative work-family interaction.

The reliability of results was assessed through the Cronbach alpha coefficient. The DUWAS scores ranged between α 0.753 and α 0.81, and SWING between α 0.796 and α 0.896 (Table 1), suggesting acceptable and good internal consistency.[50] These results corroborate those found in validation studies[14,29-30,49].

Data analysis

Quantitative analysis of data was performed using the program for statistical and epidemiological analysis of data (EPIDAT version 4.2) and Statistical Package for the Social Sciences (IBM-SPSS version 25.0). Absolute and relative frequencies mean and standard deviation were used for descriptive analysis, as well the Pearson Correlation Coefficient for inferential analysis, and the Stepwise method for multiple linear regression. The statistical significance level was set at 5% ($p<0.005$).

Ethical considerations

The study was approved by the Ethics Committee of Nursing School of Porto (2019/1526) and the Council of the Portuguese Order of Nurses collaborated in disseminating the study on its web page. The nurses willing to participate could access the information on this study through a link made available, which also included informed consent. Upon acceptance, the participants were able to fill the questionnaire.

Results

From the total participants, 82% were women, 63% were married or cohabiting, 61% had children, and were aged on average 38 years (SD=9.7), ranging between 21 and 61 years. As for academic qualifications, the majority had an undergraduate degree (49%), followed by a master's degree (24%). The average time of professional experience was 16 years ((SD=9.8), being 58% of the sample working in hospitals and 25% in primary health care, with a permanent employment contract (89%) and shift work (59%). As for the geographical area, the majority of participants were located in the northern region (59%), followed by the centre (21%) and south (20.4%). Concerning the perception of stress related to the professional activity, 90% of respondents considered it stressful and 61% of nurses referred to engaging in after-work leisure activities.

The results obtained for workaholism, according to the cut-off point as proposed by authors[14] highlighted a prevalence of 27.1%. Concerning the mean value for dimensions compulsive work and excessive work, moderate values were found, scoring lower for compulsive work and overall workaholism when compared with excessive work (Table 1).

For the work-family interaction (Table 1), weak and moderate mean values were found for the four dimensions of the scale (.93 to 1.31), with higher mean values for the negative work- family interaction and positive family-work interaction,

Table 1. Mean, standard deviation, Cronbach Alpha, Pearson correlations between dimensions DUWAS and SWING.

Variables	M	SD	Cronbach Alpha	1	2	3	4	5	6
1. Compulsive work	2.05	0.56	0.753						
2. Excessive work	2.67	0.52	0.628	0.546**					
3. Workaholism	2.36	0.48	0.817	0.888**	0.870**				
4. Negative work-family interaction	1.31	0.58	0.896	0.475**	0.619**	0.619**			
5. Negative family-work interaction	0.93	0.63	0.804	0.149**	0.199**	0.197**	0.343**		
6. Positive work-family interaction	1.09	0.57	0.799	-0.20	-0.092**	-0.062	-0.204**	0.024	
7. Positive family -work interaction	1.22	0.67	0.796	0.060	0.056	0.066	-0.030	0.040	0.501**

**p ≤ .010

Source: Authors elaboration.

followed by the positive work-family interaction and the negative family-work interaction.

The analysis of correlations (Table 1) showing a positive and moderate association of workaholism, compulsive work and excessive work with the negative work-family interaction, and a very weak association with the negative family-work interaction.[51] Finally, the positive work-family interaction showed only a weak statistical association with excessive work. In sum, the results showed a relatively weak association of workaholism with the family-work interaction in both directions.

The Stepwise multiple linear regression was calculated to analyse the variables that best explained workaholism (Table 2). The sociodemographic (gender, age, civil status, children and academic qualification) and work (time of professional experience, local and geographical area, employment contract, shift work, perception of stressful work and leisure activities) variables were considered, as well as the dimensions of the Work-Home Interaction Scale.

Table 2 displays the variables identified as significant predictors. The data show that workaholism is explained by the relationship of the work-family interaction (39%), occupational variables (10.6%) and sociodemographic variables (1.2%); the compulsive work by the relationship of work-family interaction (23.1%), occupational variables (7.6%) and sociodemographic variables (1.8%); and the EW by the relationship of work-family interaction (38.8%), occupational variables (9.9%) and sociodemographic variables (0.7%).

The linear regression also revealed that the best predictors for workaholism were the variables negative work-family interaction accounting for 38.3% (β=-.621), the perception of stressful work, scoring 7% (β=-.246, those who perceive their work as stressful) and gender reaching .7% (β=-.083, women). As for compulsive work, results showed that the variables negative work-family interaction accounted for 22.5% (β=-.487), the perception of stressful work scored 3.6% (β=-.197, those who perceive their work as stressful) and age reached 1.7% (β=-.136, the younger nurses). Finally, the higher predictive values for excessive work were found in the variables negative work-family interaction, accounting for 38.3% (β=-.621), the perception of stressful work, scoring 7.9% (β=-.267, those who perceive their work as stressful) and gender, reaching 0.7% (β=-.082, women).

Thus, work-family interaction is the best predictive variable for workaholism and its dimensio ns.

Discussion

Regarding the prevalence of workaholism among nurses, the 27.1% score found in this study was higher when compared to that identified in Italian nurses[13] accounting for 21% and 13.7% in Iranian nurses[19]. Concerning workers in management areas, identified a prevalence of workaholism of 9.4%[52], while in medical residents[16] it was 16% and 29% in a sample of Brazilian workers[53].

Regarding the dimensions of workaholism, they showed a higher mean value for excessive work compared to compulsive work, in line with the results of other study[54-55]. However, in a study with Italian nurses[56] and university academics technical and administrative personnel in Norway[24], compulsive work scored slightly higher.

Considering the work-family interaction, the negative influence expressed in the work-family

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Table 2. Multiple regression analysis (Stepwise) for workaholism using sociodemographic/professional, variables and work-family interaction's dimensions.

Dimensions	Predictors		R Square	R Square change	β	t	p	F	p
Workaholism	Sociodemographic	Gender	.007	.007	-.083	-2.355	.019*	5.423	.020*
		Age	.012	.005	-.074	-2.094	.037**	4.915	.008**
	Work	Stressful work	.070	.070	-.246	-6.788	.000***	45.737	.000***
		Leisure activities	.089	.019	.131	3.395	.001**	29.811	.000***
		Years of job experience	.097	.008	-.115	-2.887	.004**	21.816	.000***
		Workplace	.106	.009	.103	2.494	.013*	18.051	.000***
	Work-family interaction	Negative work-family interaction	.383	.383	.621	22.998	.000***	519.571	.000***
		Positive family-work interaction	.390	.007	.085	3.132	.002**	267.423	.000***
Compulsive work	Sociodemographic	Age	.018	.018	-.136	-3.882	0.000***	15.070	.000***
	Work	Stressful work	.036	.036	-.197	-4.862	0.000***	22.298	.000***
		Years of job experience	.056	.020	-.165	-4.093	0.000***	18.230	.000***
		Leisure activities	.067	.010	.096	2.436	0.015**	14.541	.000***
		Workplace	.076	.009	.100	2.399	0.017**	12.431	.000***
	Work-family interaction	Negative work-family interaction	.225	.225	.487	15.852	.000***	243.580	.000***
		Positive work-family interaction	.232	.006	.080	2.593	.010**	125.985	.000***
Excessive work	Sociodemographic	Gender	.007	.007	-.082	-2.337	.020*	5.462	.020*
	Work	Stressful work	.079	.079	-.267	-6.905	.000***	52.278	.000***
		Leisure activities	.099	.021	.144	3.729	.000***	33.644	.000***
	Work-family interaction	Negative work-family interaction	.383	.383	.621	22.951	.000***	519.271	.000***
		Positive family-work interaction	.388	.006	.075	2.767	.006**	265.528	.000***

*$p \leq .050$ **$p \leq .010$ *** $p \leq .001$.

Source: Authors elaboration.

interaction and the positive family-work interaction were highlighted, corroborating national[30,43] and international studies[57]. Also, authors found higher mean values for the positive influence in both work-family interaction and family-work interaction directions[58-59]. Furthermore, the negative effects of work within the family have been addressed in several studies[15,17].

A negative and weak interaction between workaholism and the negative work-family interaction was also found, much in line with other findings[22,48].

Regarding workaholism and its dimensions, the main predictor found in the present study was the work-family interaction, with a greater negative impact on the negative work-family interaction dimension. This result is in line with the literature, suggesting that the family is one of the variables with higher influence on workaholism[15,60-61], associated with the most prominent societal changes with women playing an active role in the labour market and also the reshaping of family and professional role-play[5,62].

Considering occupational variables, only the perception of stress and leisure activities were found to be predictors. However, the impact of stress was found higher and negative compared to leisure activities. These results are in line with the model[15] and the study[63], who identified stress as one of the antecedents of workaholism. Also, some studies point out to other factors, such as job demands, organizational culture, available resources and work overload[12,18,61]. On the other hand, among the sociodemographic variables,

age and gender were found to be significant predictors. However, gender did not show a significant association with compulsive work, much in line with the other findings[64-66]. Contrarily, a study suggests that male gender constitutes a risk factor[60].

This study presents as limitations its cross-sectional nature and its online dissemination. However, the study points out some strengths such as the sample size, and insight on the work-family interaction variable in both directions and quality of influence, aiming to explain the workaholism phenomenon in a sample of nurses.

Conclusions

These study findings confirm the existence of workaholism among nurses, showing moderate values, but higher for compulsive work. Considering the work-family interaction, the negative influence expressed by the work-family interaction direction was highlighted, and it was also found to be the best predictor for workaholism, indicating that the higher the negative work-family interaction, the higher workaholism, compulsive work and excessive work. Regarding other predictor variables, workaholism, compulsive work and excessive work were found to be associated with nurses showing a lower perception of stress and with younger and female nurses, compared to those who reported engaging in leisure activities.

Considering these findings, further studies should be undertaken to help better understand the phenomenon in nursing professionals, namely by adding new organizational variables and with a longitudinal character. Moreover, it would be of great interest to integrate these themes into the scope of the nursing degree course.

In sum, this study contributes to raise managers' awareness of the importance of work organisation, integrating the family dimension and contributing to the development of programmes to promote health at work. Furthermore, it will likely enhance the work-family-work integration, namely by implementing measures favouring the work-family interaction and enabling the assessment of the impact of the implemented programmes. It is important to notice that work-family balance directive[67] introduces in Europe, since june 2019, a set of legislative actions designed to promote a less conflict with this major current roles of workers' life. Moreover, with sudden events such as COVID-19 pandemic, nurses are suffered increased demand that can lead to workaholism and difficult an adequate balance between work and family.

Collaborations

EMN Borges, CAC Sequeira, MP Mosteiro-Díaz contributed to study design and study supervision. EMN Borges contributed to data collection. Elisabete Borges and CML Queirós contributed to data analysis. EMN Borges, CAC Sequeira, CML Queirós and MP Mosteiro-Díaz contributed to manuscript writing, critical revisions of the important intellectual content, final approval of the version to be published.

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