ORIGINAL

Professional Quality of Life and Job Stress among Nurses in COVID-19 Areas

Calidad de vida profesional y estrés laboral en enfermeros de áreas Covid-19

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ABSTRACT

Background: the COVID-19 pandemic has posed unprecedented challenges in the healthcare field, notably affecting nursing professionals working in critical areas. These challenges have impacted their professional quality of life (PQoL) and increased job stress levels, which are crucial for both the well-being of healthcare personnel and the quality of care provided to patients.

Objective: this study aims to explore the relationship between professional quality of life and job stress among nurses at a medium-complexity hospital in Lima, Peru, during the COVID-19 pandemic.

Methods: a quantitative, non-experimental, cross-sectional, correlational methodology was used, with a non-probabilistic sample of 59 nurses. Data were collected through online questionnaires assessing PQoL and job stress, using validated tools such as the Nursing Stress Scale and the PQoL-35 Questionnaire.

Results: the majority of participants (69,5 %) perceive their PQoL as good, highlighting high levels of intrinsic motivation and perceived quality of life. In contrast, workload was the most negatively valued aspect. Job stress was perceived as low overall, and a moderate positive correlation between PQoL and job stress (r = 0,517; p < 0,05) was found, suggesting that better working conditions could improve PQoL. Workload was identified as a significant factor of job stress.

Conclusions: despite the challenges imposed by the pandemic, nurses maintain a positive perception of their PQoL, especially in terms of intrinsic motivation and perceived quality of life. However, workload is highlighted as a critical factor of job stress.

Keywords: COVID-19; Professional Quality; Life; Job Stress; Nursing Professionals; Workload.

RESUMEN

Background: la pandemia de Covid-19 ha impuesto retos sin precedentes en el ámbito sanitario, afectando notablemente a los profesionales de enfermería que trabajan en áreas críticas. Estos retos han repercutido en su calidad de vida profesional (CVP) y han incrementado los niveles de estrés laboral, aspectos esenciales tanto para el bienestar del personal sanitario como para la calidad del cuidado ofrecido a los pacientes.

Objetivo: este estudio busca explorar la relación entre la calidad de vida profesional y el estrés laboral en enfermeros de un hospital de mediana complejidad en Lima, Perú, durante la pandemia por Covid-19.

Métodos: se empleó una metodología cuantitativa, no experimental, transversal y correlacional, con una muestra no probabilística de 59 enfermeros. Los datos se recopilaron mediante cuestionarios en línea que evaluaban la CVP y el estrés laboral, utilizando herramientas validadas como el Nursing Stress Scale y el Cuestionario CVP-35.

Resultados: la mayoría de los participantes (69,5 %) perciben su CVP como buena, destacando altos niveles

de motivación intrínseca y calidad de vida percibida. En contraste, la carga de trabajo fue el aspecto más negativamente valorado. El estrés laboral se percibió como bajo en general, y se encontró una correlación positiva moderada entre la CVP y el estrés laboral (r = 0,517; p < 0,05), sugiriendo que mejores condiciones de trabajo podrían mejorar la CVP. La carga de trabajo se identificó como un factor significativo de estrés laboral.

Conclusiones: a pesar de los retos impuestos por la pandemia, las enfermeras mantienen una percepción positiva de su PQoL, especialmente en términos de motivación intrínseca y calidad de vida percibida. Sin embargo, la carga de trabajo se destaca como un factor crítico de estrés laboral.

Palabras clave: COVID-19; Calidad Profesional; Vida; Estrés Laboral; Profesionales de Enfermería; Carga de Trabajo.

INTRODUCTION

The COVID-19 pandemic has drastically reshaped the global healthcare landscape, imposing unprecedented challenges on healthcare professionals, especially nurses who are at the forefront. (Ricalde-Castillo et al., 2023) The pandemic has brought unprecedented challenges in the healthcare sector, significantly affecting the professional quality of life and job stress levels of nursing professionals working in critical areas. These professionals have been on the front line of the health crisis response, facing significantly increased workloads, risks of personal infection, and the emotional management of critical patients and their families. The professional quality of life in this context is impacted not only by the job stress inherent to the profession but also by the extraordinary conditions imposed by the pandemic.[1] Existing literature on job stress in healthcare professionals has identified multiple risk factors including long working hours, dealing with death and suffering, workplace conflicts, and exposure to infectious diseases.[2,3,4] However, the outbreak of COVID-19 has exacerbated these conditions, introducing additional challenges such as the rapid adaptation to new safety protocols, uncertainty about the effectiveness of personal protective measures, and the psychological impact of a heightened risk of contagion.[5,6,7,8] Recent research has begun to explore the specific impact of the pandemic on the mental health and quality of life of healthcare workers, noting a significant increase in the prevalence of symptoms of stress, anxiety, and depression.[5,9,10] Despite increasing attention to these issues, there remains an urgent need for studies that specifically address the situation of nurses in COVID-19 areas, considering the particularities of their role and working conditions.

The professional quality of life not only affects the well-being of nurses but also has direct implications for the quality of care provided to patients. A stressful work environment can lead to medical errors, a decrease in the quality of care, and an increase in staff turnover.[11,12] Professional quality of life (PQoL) and job stress are critical dimensions in the well-being of healthcare workers, especially in the context of the COVID-19 pandemic, which has challenged global health systems in an unprecedented manner. PQoL is understood as a measure of emotional factors encompassing both subjective perception and the set of feelings towards work, reflecting both positive and negative aspects of the work experience.[13] In contrast, stress is defined as a biological activation response to the inability to adapt to environmental demands, accompanied by negative emotions and physiological modifications that compromise homeostasis.[14] During the COVID-19 pandemic, healthcare professionals, particularly nurses, have faced traumatic stressors exacerbated by collapsed health systems and insufficient staffing, increasing the risk of suffering syndromes such as Burnout, depression, and post-traumatic stress.[15,16] This scenario has highlighted the importance of ensuring dignified working conditions that align with international standards to safeguard both the mental health of workers and the quality of care provided to patients.[17]

Job stress, particularly in critical areas such as caring for COVID-19 patients, not only negatively affects the mental health of nurses but also has direct implications on their professional quality of life and, by extension, on the quality of healthcare.[18,19] Research has highlighted the prevalence of job instability, poor working conditions, and devaluation of the professional role as contributing factors to the deterioration of PQoL.[20,21,22] In Peru, the disparity between regulations and practice regarding the nurse-to-patient ratio has resulted in work overload and perception of poor care, underscoring the urgency of addressing these issues to improve PQoL and reduce job stress in this professional group.[23,24] Despite these challenges, research on professional quality of life and stress in nurses in healthcare crisis contexts in Peru has been limited, highlighting the need to explore these dimensions to underpin the implementation of support programs and improvement of the emotional and professional well-being of nurses.[1,8] Therefore, in view of these manifestations in nursing professionals, the present study was conducted with the objective of determining the relationship between professional quality of life and job stress of nursing professionals in a medium-complexity hospital in Lima during the COVID-19 pandemic.

MATERIAL AND METHODS

Participants
A basic, quantitative, non-experimental, cross-sectional, correlational study was conducted [25] with 75 nurses working in the services of a medium-complexity hospital in Lima, using a non-probabilistic sample of 59 participants. Nurses in administrative positions or with less than three months of tenure in a service were excluded.

Procedure
Data collection was performed using a virtual questionnaire created through Google Forms, which included an introduction, informed consent, sociodemographic data, and scales such as the Spanish version of the Nursing Stress Scale and the Professional Quality of Life Questionnaire (PQoL-35). Participants received the form via WhatsApp groups and personal messages to their cell phones. Data collection took place during July and August 2021.

Instruments
The Nursing Stress Scale, in its Spanish cultural adaptation, comprises 34 items grouped into seven factors related to workload, death and suffering, inadequate preparation, lack of support and uncertainty in treatment, social environment issues, problems with doctors, and problems with other nursing team members. As a Likert scale, it considers the alternatives (poor = 0, fair = 1, good = 2, and excellent = 3). It has been validated in different languages and culturally reviewed by specialists from around the world. In Chimbote, Peru, it was validated through psychometric analysis, achieving a content validity with Aiken's V of 0,98, while Cronbach's alpha reached 0,919 for reliability.[26] The score interpretation was: High degree: 68 to 102, Medium degree: 34 to 67, and Low degree: less than 34.[27]

The PQoL-35 is a Likert-type scale, with values from 1 to 10; the response categorization is: "Poor" for values 1,2, "Fair" for values 3,4,5, "Good" for values 6,7,8, and "Excellent" for values 9,10.[28] It includes four dimensions: management support, workload demand, intrinsic motivation, and a general measure of quality of life perceived by the subject.[29] It underwent content validity through Aiken's V Coefficient with significant validity in all items. Cronbach's alpha coefficient found that each of the factors has reliability (workload: 0,90; intrinsic motivation: 0,91; and management support: 0,95). Its score ranged from 35 to 140, classified as excellent PQoL level: 114 to 140; Good level: 88 to 113; Fair level: 61 to 87; and Poor level: 35 to 60.

Analysis
Data processing used SPSS version 25. The normality of the data was verified by Kolmogorov-Smirnov, followed by Pearson's correlation test for variables, Spearman's Rho for specific hypotheses, and Chi-square to associate variables and sociodemographic aspects.

Ethics Committee

The research was authorized by the ethics committee of the Faculty of Health Sciences of the Peruvian Union University (UPeU), in addition to the informed consent of the participants.

RESULTS

Overall Professional Quality of Life Perception
The scores show that 69,5 % of respondents rated the overall PQoL as good. Furthermore, regarding the dimensions of this variable, there are excellent levels in perceived quality of life (67,8 %) and intrinsic motivation (54,2 %), followed by a good PQoL rating in the management support dimension (44,1 %), while the dimension presenting lower levels of PQoL was workload with 44,1 % at a fair level and 37,3 % poor (table 1).

Table 1. Dimensions of the professional quality of life perceived by the nursing staff								
Variables/Dimensions	Poor		Fair		Good		Excellent	
	N	%	N	%	N	%	N	%
Professional Quality of Life	1	1,7	14	23,7	41	69,5	3	5,1
Perceived Quality of Life	1	1,7	8	13,6	10	16,9	40	67,8
Intrinsic Motivation	2	3,4	3	5,1	22	37,3	32	54,2
Workload	22	37,3	26	44,1	7	11,9	4	6,8
Managerial Support	3	5,1	24	40,7	26	44,1	6	10,2

Perception of Job Stress

Job stress is perceived as low, both at a general level (76,3 %), and in its dimensions: psychological environment (76,3 %), physical environment (69,5 %), and social environment (59,3 %) (table 2).

Table 2. Dimensions of job stress perceived by nurses						
Variables/Dimensions	Low		Medium		High	
	N	%	N	%	N	%
Job Stress	45	76,3	14	23,7	0	0
Social Environment	35	59,3	23	39,0	1	1,7
Psychological Environment	45	76,3	13	22,0	1	1,7
Physical Environment	41	69,5	18	30,5	0	0

Correlation Between Job Stress and Professional Quality of Life

Table 3 presents the correlation between the variables of job stress and professional quality of life of the nurses. Both variables follow a normal distribution (p = 0,06, p > 0,05), finding a moderate positive correlation between professional quality of life and job stress according to Pearson's correlation test (r = 0,517; p < 0,05).

Table 3. Correlation between job stress and professional quality of life		Professional Quality of Life	Estrés laboral
Professional Quality of Life	Pearson Correlation	1	,517**
	Significance (2-tailed)		,000
	N	59	59
Job Stress	Pearson Correlation	,517**	1
	Significance (2-tailed)	,000	
	N	59	59
**. La correlación es significativa en el nivel 0,01 (bilateral).			
**. The correlation is significant at the 0,01 level (2-tailed).			

Relationship Between Job Stress and Professional Quality of Life Dimensions

Table 4 shows the results of the PQoL dimensions of nurses according to the level of job stress. Considering that the dimensions did not have normal distributions (p = 0,03, p < 0,05), the non-parametric Spearman's Rho test was applied. The correlation analysis showed a weak non-significant positive relationship between job stress and the PQoL dimensions: management support, intrinsic motivation, and perceived quality of life (p > 0,05). In contrast, the workload dimension was positively and moderately correlated with the job stress variable (Rho = 0,626, p < 0,01), demonstrating that a higher workload leads to greater job stress.

Table 4. Relationship between job stress and perceived professional quality of life according to dimensions						
Professional Quality of Life			Job Stress*		Spearman's Rho	P-value
Dimension	Scale	Low	Medium	High		
Managerial Support	Poor	2 (3,4 %)	1 (1,7 %)	0 (0,0 %)	0,013	0,923
	Fair	17 (28,8 %)	7 (11,9 %)	0 (0,0 %)		
	Good	22 (37,3 %)	4 (6,8 %)	0 (0,0 %)		
	Excellent	4 (6,8 %)	2 (3,4 %)	0 (0,0 %)		
Workload	Poor	22 (37,3 %)	0 (0,0 %)	0 (0,0 %)	0,626	< 0,01
	Fair	20 (33,9 %)	6 (10,2 %)	0 (0,0 %)		
	Good	2 (3,4 %)	5 (8,5 %)	0 (0,0 %)		
	Excellent	1 (1,7 %)	3 (5,1 %)	0 (0,0 %)		
Intrinsic Motivation	Poor	1 (1,7 %)	1 (1,7 %)	0 (0,0 %)	-0,14	0,291
	Fair	3 (5,1 %)	0 (0,0 %)	0 (0,0 %)		
	Good	18 (30,5 %)	4 (6,8 %)	0 (0,0 %)		
	Excellent	23 (39,0 %)	9 (15,3 %)	0 (0,0 %)		

Perceived Quality of Life	Poor	1 (1,7 %)	0 (0,0 %)	0 (0,0 %)	Pearson	Pearson
	Fair	6 (10,2 %)	2 (3,4 %)	0 (0,0 %)	0,071	0,596
	Good	9 (15,3 %)	1 (1,7 %)	0 (0,0 %)		
	Excellent	29 (49,2 %)	11 (18,6 %)	0 (0,0 %)		

(*) The values represent the frequency of cases and their respective percentages in parentheses.

Sociodemographic Factors Associated with PQoL and Job Stress

An additional analysis of sociodemographic data using the chi-square test found that gender is associated with professional quality of life and perceived quality of life (p < 0,05), as well as with job stress in its social environment dimension. Another demographic aspect is the number of children, which is associated with job stress in the psychological environment dimension (p < 0,05) (table 5).

Table 5. Demographic aspects associated with PQoL and job stress

Asociación	Chi cuadrado	
	Valor	Valor p
Professional Quality of Life * Gender	7,888	0,048
Perceived Quality of Life * Gender	18,260	0,000
Social Environment * Gender	11,222	0,004
Number of Children * Psychological Environment	13,258	0,039

DISCUSSION

This research reveals that nurses consider their professional quality of life (PQoL) to be good, especially in terms of intrinsic motivation and perceived quality of life, which are rated as excellent. This perception is supported by international studies, such as one conducted in Venezuela that showed a regular quality of life among ICU nurses, with intrinsic motivation being the most valued aspect.[30] Studies in the Philippines [31] and Oman [32] also reported high and moderate levels of work quality of life, respectively. A systematic review indicated that in eight countries, the work quality of life in nursing is moderate, with 52,4 %,[33] while a study in China highlighted the perception of a favorable hospital ethical climate for promoting professional quality of life.[34] In contrast, in Spain, high levels of compassion fatigue and burnout were identified, factors closely linked to professional quality of life.[35]

However, some studies report less positive perceptions. In Brazil, work quality of life was perceived as neutral,[36] and in Hawassa, Ethiopia, 67,2 % of nurses reported dissatisfaction with their work quality of life.[37] Research in Iran and Ethiopia highlighted the need for interventions to improve a work quality of life considered low.[38,39]

The coronavirus pandemic has intensified the stressful working conditions for nursing professionals, negatively influencing their perception of work quality of life and altering their performance. Factors such as workload, managerial support, and intrinsic motivation play a crucial role in this perception.[36] Moreover, variables like educational level, monthly income, unit, and work environment are identified as significant predictors of work quality of life, suggesting the importance of specific strategies for improvement and, therefore, patient care improvement and absenteeism reduction.

Surprisingly, this study reveals that nurses perceive a low level of job stress, both globally and by dimensions, contrasting with previous research, such as a study in Wuhan that showed a medium level of job stress among frontline nurses against COVID-19.[40] A study in Brazil associated the Burnout syndrome with high levels of stress and negative perceptions of quality of life,[41] suggesting that prolonged hours and staff shortages might contribute to this phenomenon. However, a relationship between quality of life and job stress was found that diverges from studies in other contexts where high stress levels are linked to diminished quality of life.[42,43]

Workload emerges as a critical factor associated with job stress, confirmed by studies in Spain[44] and Peru,[45] and described as the main stressor in Chilean research.[46] Additionally, a significant association between gender and the number of children with job stress is observed, highlighting the impact of demographic variables on this aspect.[47,48,49]

Implications

The findings suggest that despite the adversities imposed by the health crisis, nursing professionals maintain a positive perception of their PQoL, particularly in dimensions such as intrinsic motivation and perceived

quality of life. However, workload is identified as a significant factor of job stress, reaffirming the need to address working conditions to preserve the mental health and well-being of these essential professionals. From a practical perspective, the results underscore the importance of implementing interventions aimed at improving the working conditions of nurses, especially concerning workload management. Strategies such as proper human resources allocation, optimization of work schedules, and strengthening managerial support can significantly alleviate stress and improve PQoL. Politically, this study calls on health policy makers to reconsider the labor regulations governing the work of nursing professionals. It is imperative to establish standards that ensure safe and equitable working conditions, promoting a work environment that not only protects the physical and mental health of nurses but also ensures the quality of care provided to patients. Theoretically, this work contributes to the existing literature by providing empirical evidence on the relationship between PQoL and job stress in a health crisis context. The findings support previous theories on job stress and job satisfaction while inviting future research to further explore how different dimensions of PQoL interact with various work stressors.

Limitations

A significant limitation is the cross-sectional design of the research, which, while providing a valuable snapshot of the current state of professional quality of life and job stress among nurses in COVID-19 areas, limits our ability to infer causality or assess how these variables might change over time. This design prevents us from understanding the dynamics and temporal variations in professional quality of life and job stress, especially relevant in the fluctuating context of the COVID-19 pandemic. Additionally, the use of a non-probabilistic sample limits the generalizability of our findings. Although the sample was adequate for exploring the relationships between professional quality of life and job stress in a specific context, the results may not be applicable to all nurses working in COVID-19 areas or in different geographical and cultural contexts. This suggests the need for studies in a variety of settings and with representative samples to validate and extend our findings. Another limitation lies in the participants' self-perception of their quality of life and job stress, collected through questionnaires. While these tools are valuable for obtaining information on individual perception, they are also subject to response biases, including social desirability bias, which could influence how participants report their experiences. For future research, it would be valuable to adopt a longitudinal design that allows for monitoring changes in professional quality of life and job stress over time, especially in relation to successive waves of the pandemic and changes in public health policies. This would help better understand causality and identify critical moments or factors that may significantly influence nurses' quality of life and job stress.

CONCLUSIONS

The study on professional quality of life (PQoL) and job stress among nurses in COVID-19 areas sheds light on the complex interaction between working conditions and the well-being of nursing professionals during the COVID-19 pandemic. Despite facing unprecedented challenges, including increased workload, risk of infection, and emotional management of critical patients, most participants report a good perception of their PQoL, highlighting intrinsic motivation and perceived quality of life as particularly positive aspects. This finding underscores the resilience and commitment of nurses in the face of adverse conditions, as well as the importance of internal factors such as motivation in maintaining a positive perception of their work environment. However, the study also identifies workload as a significant determinant of job stress, suggesting that human resource management policies and work planning are essential to mitigate stress in the hospital setting. This result aligns with previous research emphasizing the relationship between working conditions and the psychological well-being of health professionals. The moderate positive association found between PQoL and job stress indicates that improving working conditions and reducing job stress can have a direct impact on enhancing the professional quality of life of nurses. This, in turn, has direct implications for the quality of care provided to patients, as a stressful work environment can lead to medical errors and decrease the quality of care.

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