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Factors related to quality of working life at a Brazilian University during the pandemic

Fatores relacionados à qualidade de vida no trabalho em universidade brasileira durante a pandemia
Factores relacionados con la calidad de vida laboral en una universidad brasileña durante la pandemia

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Abstract
Objective: to identify the factors related to the quality of working life of public servants at a university during the COVID-19 pandemic. **Methods:** a cross-sectional, exploratory, and observational study conducted with 253 public servants from a Brazilian university between April and August 2021. An online questionnaire was administered to assess sociodemographic, health, and work-related data, in addition to the Quality of Working Life Questionnaire-bref scale. Pearson's chi-square, Fisher's exact, Mann–Whitney U, and Kruskal–Wallis tests were performed, with findings considered statistically significant at a p-value <0.05. **Results:** 91.7% of participants achieved a satisfactory or very satisfactory level of quality of working life (QWL). The personal domain obtained the highest score (70.32; mean=3.80; SD=0.62). Age group (p<0.046), income (p<0.038), lifestyle, and work-related aspects were associated with better QWL assessment, particularly job satisfaction (p<0.001), absence of smoking history (p<0.017), and absence of overcommitment (p<0.001). The professional domain presented the lowest score (57.95; mean=3.31; SD=0.68), indicating the need for further investigation. **Conclusion:** despite all the challenges associated with the pandemic, participants' QWL was considered satisfactory or very satisfactory and was associated with some sociodemographic factors, lifestyle habits, health-related and work-related aspects, indicating the need for greater attention to the professional domain.

Descriptors:
Quality of Life. Work. Universities. Public Sector. Government Employees.

Whats is already known on this?
Quality of working life is a multifactorial construct that requires organizational strategies to investigate, measure, monitor, and mitigate the factors that influence workers' lives.

What this study adds?
Higher levels of quality of working life among public servants were associated with higher income, absence of smoking history, lack of overcommitment, and job satisfaction.

Resumo
Objetivo: *identificar os fatores relacionados à qualidade de vida no trabalho de servidores públicos de uma universidade durante a pandemia de COVID-*

19. ***Métodos:*** *pesquisa transversal, exploratória e observacional, realizada com 253 servidores públicos de uma universidade brasileira entre abril e agosto de 2021. Aplicou-se questionário online para avaliação de dados sociodemográficos, de saúde e de trabalho, além da escala Quality of Working Life Questionnaire-Bref. Realizaram-se os testes qui-quadrado de Pearson, exato de Fisher, U de Mann-Whitney e Kruskall-Wallis, considerando-se significativos os achados com valor de p inferior a 0,05.* ***Resultados:*** *91,7% dos servidores obtiveram nível satisfatório/muito satisfatório de qualidade de vida no trabalho (QVT). O domínio pessoal obteve melhor pontuação (70,32; x=3,80; DP=0,62). A faixa etária (p<0,046), a renda (p<0,038), o estilo de vida e aspectos laborais estiveram relacionados a uma melhor avaliação de QVT, com destaque para satisfação com o trabalho (p<0,001), ausência de tabagismo (p<0,017) e comprometimento excessivo (p<0,001). O domínio profissional apresentou menor escore (57,95; x=3,31; DP=0,68), sinalizando necessidade de investigação.* ***Conclusão:*** *apesar de todas as questões associadas à pandemia, a QVT dos servidores foi considerada satisfatória/muito satisfatória, estando relacionada a alguns fatores sociodemográficos, como hábitos de vida, aspectos de saúde e laborais, denotando maior atenção no domínio profissional.*
Descritores:
Qualidade de Vida. Trabalho. Universidades. Setor Público. Servidores Públicos.

Resumen
Objetivo: *identificar los factores relacionados con la calidad de vida en el trabajo de los servidores públicos de una universidad durante la pandemia de COVID-19.* ***Métodos:*** *estudio transversal, exploratorio y observacional, realizado con 253 servidores públicos de una universidad brasileña entre abril y agosto de 2021. Se aplicó un cuestionario en línea para evaluar datos sociodemográficos, de salud y laborales, además de la escala Quality of Working Life Questionnaire-bref. Se realizaron las pruebas de chi-cuadrado de Pearson, exacta de Fisher, U de Mann-Whitney y Kruskal-Wallis, considerándose significativos los resultados con un valor de p inferior a 0,05.* ***Resultados:*** *el 91,7% de los servidores obtuvo un nivel satisfactorio/muy satisfactorio de calidad de vida en el trabajo (CVT). El dominio personal presentó la puntuación más alta (70,32; x̄=3,80; DE=0,62). El grupo etario (p<0,046), los ingresos (p<0,038), el estilo de vida y los aspectos laborales se relacionaron con una mejor evaluación de la CVT, destacándose la satisfacción con el trabajo (p<0,001), la ausencia de tabaquismo (p<0,017) y el compromiso excesivo (p<0,001). El dominio profesional presentó la puntuación más baja (57,95; x̄=3,31; DE=0,68), lo que indica la necesidad de investigaciones adicionales.* ***Conclusión:*** *a pesar de todos los desafíos asociados con la pandemia, la CVT de los servidores fue considerada satisfactoria/muy satisfactoria y se relacionó con algunos factores sociodemográficos, hábitos de vida, aspectos de salud y laborales, lo que pone de manifiesto la necesidad de una mayor atención al dominio profesional.*
Descriptores:

Calidad de Vida. Trabajo. Universidades. Sector Público. Empleados de Gobierno.

INTRODUCTION

Quality of life results from a set of elements that comprise individuals' value systems, culture, and self-perception in relation to life, as well as their goals, standards, opportunities, and aspirations. Therefore, it encompasses aspects related to physical and mental health, social relationships, beliefs, level of independence, and characteristics of the developmental process.[1] Accordingly, work environments should provide workers with satisfaction and well-being, thereby promoting quality of working life (QWL).[2]

It is within this context that the occupational health nurse plays a role by implementing preventive practices that contribute to the promotion, protection, and recovery of workers' health. To accomplish this, occupational health nurses must remain up to date on the major social phenomena that may interfere with the work environment, identifying emerging risks and adapting their practices to address them, while also keeping abreast of current scientific evidence and legislation that may guide their professional practice.[3]

The first studies on QWL emerged between the 1970s and 1980s, led by North American researchers.[4] However, although the topic is relatively recent, recent analyses have shown a declining trend in the publication of QWL-related articles in Brazil. Despite the availability of several validated instruments for its assessment, such as the Quality of Working Life Questionnaire-bref (QWLQ-bref), the Total Quality of Work Life, and the *Inventário de Avaliação da Qualidade de Vida no Trabalho*, there has been limited academic interest in this topic.[4]

Therefore, managers should assess the QWL of their employees in order to examine and analyze the conditions that affect workers' health, thereby identifying priority areas for intervention.[2,5] In this context, the role of occupational health nurses in the workplace is essential, enabling interventions tailored to workers' needs, promoting health, fostering a culture of safety, creating safer work environments, and enhancing productivity.[6]

Within the Brazilian federal public service, university employees perform their professional activities in accordance with the *Regime Jurídico Único*, which establishes their rights and responsibilities, including job stability and career plans that encourage professional advancement and qualification. Over recent decades, changes in the work environment of these institutions have occurred, potentially acting as stressors and contributing to adverse health outcomes among employees.[5]

Among these changes, the COVID-19 pandemic negatively affected people's lives in several ways, particularly their QWL.[1,7] The public health measures adopted created obstacles to the national economy, reducing the production of goods and services, lowering wages, and increasing unemployment, despite their purpose of protecting life. Only workers providing essential services, such as healthcare and food supply, were allowed to commute to their workplaces. Professionals whose activities could be performed from home adopted remote work,[8] as was the case for university employees.

At the university where this study was conducted, the distance between employees' residences and their workplace was considerable for most workers, since the institution is located in inland municipalities and operates within a context that includes students from other countries. Considering the logistical and safety issues involved, employees were still working remotely when the study was conducted.

Although the pandemic has ended, its consequences can still be observed, as changes in work arrangements have led to the evolution of remote work into the Management and Performance Program. This program allows some workdays to be performed from home under a hybrid arrangement or the entire work schedule to be performed remotely under a full-time arrangement. Therefore, this study aimed to identify factors related to the QWL of public servants at a Brazilian university during the COVID-19 pandemic.

METHODS

This was a cross-sectional, exploratory, and observational study conducted in accordance with the STrengthening the Reporting of OBservational studies in Epidemiology guidelines, involving public servants from a university located in one municipality in Bahia and two municipalities in Ceará, Brazil, between April and August 2021.

Data were collected using an online questionnaire sent to employees via e-mail, and the minimum number of responses established in the sample calculation was monitored using an electronic spreadsheet. It is worth noting that, in addition to the electronic questionnaire, the Informed Consent Form was also sent by e-mail.

Considering the geographical characteristics of the institution and the scope of the study, a sampling protocol based on population proportion estimation was adopted to ensure adequate sample size and representativeness. Accordingly, sample stratification by group was used to provide a broader understanding of the study population. However, no comparisons were made between groups, as all responses were analyzed as a single sample. Therefore, the sampling plan was designed to determine the minimum number of participants required using a sample size calculation model for finite populations. Based on population proportion, the following parameters were adopted: a population size (N) of 701

employees; an expected proportion (p) of 50% (due to the absence of previous data on the topic); a standard normal distribution value corresponding to a 95% confidence level (Zα/2) of 1.96; and a margin of error of 5%. The minimum calculated sample size was 248.4 participants. A total of 253 employees participated in the study.

The inclusion criteria were: being an employee of the institution under investigation; belonging to either the faculty or administrative staff categories; having an active employment relationship with the institution (including employees assigned to or seconded from other institutions, appointed to commissioned positions, or visiting professors); and using an institutional e-mail address. Despite these eligibility criteria, only permanent employees actively working at the institution participated in the study. Employees who did not complete the questionnaire in full or who were on leave during the study period were excluded.

The questionnaire used was adapted[9] and measured the following independent variables: sociodemographic characteristics (age group, income, sex, marital status, private health insurance coverage, and educational level); lifestyle habits and health-related aspects (Body Mass Index [BMI], physical activity, medication use, continuous medication use, smoking history, alcohol consumption, self-perceived health status, existing diseases, current health problems, absenteeism due to illness, presenteeism despite health problems, and development of illness during remote work); and work-related characteristics (length of employment at the institution, weekly workload, type and number of employment relationships, management position, intention to leave the institution, job satisfaction, and ability to perform work activities during the pandemic).

To assess QWL (the dependent variable), the QWLQ-bref[10] was used, which is a shortened version of the QWLQ-78.[11] The QWLQ-bref demonstrated a Cronbach's alpha coefficient of 0.9035, which was higher than that of the QWLQ-78. The instrument comprises 20 items rated on a five-point Likert scale.

The items are distributed across four domains: physical/health (4 items, maximum score of 20 points), psychological (3 items, maximum score of 15 points), personal (4 items, maximum score of 20 points), and professional (9 items, maximum score of 45 points). The responses are combined to generate the overall QWL score, calculated as the arithmetic mean of the domain scores. QWL scores range from 0 to 100 and are classified as follows: 0–22.5 (very unsatisfactory), 22.5–45 (unsatisfactory), 45–55 (neutral), 55–77.5 (satisfactory), and 77.5–100 (very satisfactory).

Additionally, the QWL classification was dichotomized to emphasize the outcome of interest, preserve the applicability criteria and assumptions of the statistical tests, and facilitate interpretation of the results, which were also presented using measures of central tendency.

Part of the Effort-Reward Imbalance scale,[12] specifically the overcommitment scale, was also used to investigate its relationship with the variables already established. On this scale, each item is scored from one to four, with a maximum total score of 24; therefore, the higher the score, the greater the level of overcommitment.

Data were processed using the publicly available statistical software EpiInfo, version 7.2.5.0 (CDC, Atlanta, USA), and IBM® SPSS® Statistics, version 23. Descriptive statistical techniques were applied for the exploratory analysis, in addition to nonparametric inferential statistical methods: Pearson's chi-square test of independence, to identify bivariate associations, and Fisher's exact test, when the assumptions required for the analysis of categorical variables were not met.

For comparisons of numerical scale results according to specific participant characteristics, such as sociodemographic and work-related variables, the following tests were used: the Mann–Whitney U test (for comparisons between two groups) and the Kruskal–Wallis test (for comparisons involving more than two groups). Findings with a p-value <0.05 were considered statistically significant.

This study complied with the ethical principles governing research involving human participants and was submitted (Certificate of Presentation for Ethical Consideration 39390220800005576) and approved (Opinion 4,429,65) by the Research Ethics Committee of the researchers affiliated institution.

RESULTS

The 253 federal public servants from a university located in the Brazilian states of Bahia and Ceará who participated in this study were faculty members and administrative staff in education. Most were younger than 40 years (54.15%), had completed graduate education or higher (84.35%), had an income above the national average (100%), had private health insurance (87.35%), and lived with a partner (62.06%).

Concerning work-related characteristics, most participants had been employed at the institution for more than three years (86.96%), had only one employment relationship (96.0%), and worked a 40-hour week (96.40%). Regarding lifestyle habits, alcohol consumption (64.43%), frequent medication use (71.15%), and an elevated mean BMI (58.50%) were observed. However, slightly more than half of the participants engaged in regular physical activity (67.59%).

As for the QWLQ-bref, data were tabulated and analyzed according to the models presented below. The results for each domain were analyzed using descriptive statistics, together with the overall QWL score (Table 1).

Table 1. Description of the values obtained for each domain and the overall score of the Quality of Working Life Questionnaire-bref. BA, CE, Brazil, 2021

Domain	Mean	Standard deviation	Coefficient of variation	Minimum value	Maximum value	Range	Final score
Physical/health	3.42	0.67	19.53	1.25	5.00	3.75	60.46
Psychological	3.67	0.68	18.61	1.33	5.00	3.67	66.73
Personal	3.81	0.63	16.56	1.50	5.00	3.50	70.32
Professional	3.32	0.67	20.68	1.11	5.00	3.89	57.95
Quality of working life	3.56	0.57	16.14	1.61	4.92	3.31	63.87

Source: prepared by the authors (2021).

The overall QWL score showed that most participants were classified as having a satisfactory or very satisfactory level of QWL (91.70%; n=232). The personal domain achieved the highest score (70.32; mean=3.81; SD=0.63), whereas the professional domain presented the lowest score (57.95; mean=3.32; SD=0.67) (Table 1).

Regarding sociodemographic characteristics, income level stood out among the variables analyzed according to the mean QWL score. Employees earning more than ten minimum wages had significantly higher QWL scores (p<0.038). In the analysis in which QWL was categorized into two groups (satisfactory/very satisfactory or neutral/unsatisfactory), age group was the only variable significantly associated with QWL, with employees younger than 40 years presenting a satisfactory or very satisfactory level of QWL (p<0.046) (Table 2).

Table 2. Distribution of participants according to sociodemographic characteristics and their relationship with the overall Quality of Working Life Questionnaire-bref score. BA, CE, Brazil, 2021

Variables	n	%	QWLQ-bref mean (SD)	P-value[1]	Quality of working life classification				p-value[2]
					Neutral/ unsatisfactory		Satisfactory/ very satisfactory		
					n	%	n	%	
Age group									
Less than 40 years	137	54.15	70.60 (10.5)	0.108	07	5.10	130	94.9	0.046*[2]
40 years or older	116	45.85	67.90 (11.7)		14	12.10	102	87.9	
Sex (n=252)									
Male	126	50.00	69.19 (10.47)	0.955	12	9.5	114	90.5	0.351[2]
Female	126	50.00	69.77 (11.68)		08	6.3	118	93.7	
Marital status									
Without a partner	96	37.94	67.91 (10.71)	0.080	09	9.4	87	90.6	0.628[2]
With a partner	157	62.06	70.31 (11.30)		12	7.6	145	92.4	
Income level (n=243)									

Up to ten minimum wages	152	62.55	69.09 (10.34)	0.038*	08	5.26	144	94.74	0.055[2]
More than ten minimum wages	91	37.45	70.51 (12.26)		11	12.09	80	87.91	
Private health insurance									
Yes	221	87.35	69.76 (11.20)	0.309	17	7.69	204	92.31	0.317[3]
No	32	12.65	66.90 (10.36)		04	12.50	28	87.50	

Legend: SD – standard deviation; QWLQ-bref - Quality of Working Life Questionnaire-bref; [1]Mann–Whitney U test; [2]Pearson's chi-square test of independence; [3]Fisher's exact test; [4]Odds Ratio; *P-value<0.05.
Source: prepared by the authors (2021).

In terms of lifestyle habits and health-related aspects, the descriptive analysis of mean QWL scores showed statistically significant differences for most variables, with higher scores among participants who had a normal BMI classification (p<0.017), reported not using medications (p<0.010), reported not using continuous medications (p<0.031), had no smoking history (p<0.017), perceived their health as good or very good (p<0.002), had not developed health problems (p<0.001), had not been absent from work due to illness (p<0.001), had not attended work while ill (p<0.001), and had not developed illnesses during emergency remote work (p<0.001).

Notably, the highest mean QWL score was observed among employees who reported not attending work while ill (p<0.001). The analytical comparisons between lifestyle and health-related variables and the dichotomized QWL classification showed a statistically significant association in Fisher's exact test for smoking history, demonstrating a stronger association between the absence of smoking history and a satisfactory or very satisfactory level of QWL (p<0.023) (Table 3).

Table 3. Distribution of participants according to lifestyle habits/health-related aspects and their relationship with the overall Quality of Working Life Questionnaire-bref score. BA, CE, Brazil, 2021

Variables	N	%	QWLQ-bref mean (SD)	p-value[1]
Body Mass Index classification				
Normal	105	41.50	71.40 (11.59)	0.017*
Overweight/altered	148	58.50	67.99 (10.58)	
Physical activity				
Yes	171	67.59	69.82 (10.99)	0.330
No	82	32.41	68.53 (11.41)	
Medication use				
Yes	180	71.15	68.35 (11.25)	0.010*
No	73	28.85	72.00 (10.41)	
Continuous medication use				
Yes	37	14.62	66.48 (11.44)	0.031*
No	216	85.38	69.90 (11.01)	
Smoking history				
Yes	38	15.02	64.44 (11.86)	0.017*
No	215	84.98	70.28 (10.78)	
Alcohol consumption				
Yes	163	64.43	68.62 (10.69)	0.388
No	90	35.57	70.82 (11.79)	
Health status				
Very good/good	180	71.15	70.72 (10.89)	0.002*
Fair/poor/very poor	73	28.85	66.15 (11.08)	
Existing diseases				
Yes	28	11.07	70.75 (10.75)	0.195
No	225	88.93	69.24 (11.18)	
Developed a health problem				

Yes	82	32.41	66.57 (11.40)	0.001*
No	171	67.59	70.76 (10.75)	
Absent from work due to illness				
Yes	64	25.30	66.09 (9.93)	<0.001*
No	189	74.70	70.52 (11.30)	
Attended work despite a health problem				
Yes	160	63.24	67.8 (11.0)	0.001*
No	93	36.76	72.1 (10.8)	
Developed a disease during emergency remote work				
Yes	121	47.83	67.00 (10.61)	<0.001*
No	132	52.17	71.61 (11.15)	

Legend: SD – standard deviation; QWLQ-bref - Quality of Working Life Questionnaire-bref; [1]Mann–Whitney U test; *P-value<0.05.
Source: prepared by the authors (2021).

Considering the work-related characteristics of participants, the descriptive analysis of the mean QWL score showed statistically significant differences, with higher mean scores among those who were faculty members (p<0.008), did not present overcommitment (p<0.001), had not considered leaving the institution (p<0.001), reported job satisfaction (p<0.001), and reported being unable to perform their work activities during the pandemic (p<0.005). Among these variables, the highest mean QWL score was observed among employees who reported being satisfied with their work (p<0.001) (Table 4).

Table 4. Work-related characteristics of public servants at a Brazilian university. BA, CE, Brazil, 2021

Variables	n	%	QWLQ-bref mean (SD)	Mean rank	p-value[1]	Quality of working life classification				p-value[1]
						Neutral/ unsatisfactory		Satisfactory/ very satisfactory		
Length of employment at the institution										
Less than 3 years	33	13.04	72.87 (13.38)	144.29	0.146	04	12.12	29	87.88	0.494[3]
3 years or more	220	86.96	68.88 (10.68)	124.41		17	7.73	203	92.27	
Employment category										
Faculty member	132	52.17	70.90 (12.55)	138.73	0.008*	13	9.85	119	90.15	
Administrative staff	121	47.83	67.77 (9.09)	114.20		08	6.61	113	93.39	0.351[2]
Management position										
Yes	79	31.23	70.54 (10.85)	135.56	0.210	07	8.86	72	91.14	
No	174	68.77	68.89 (11.23)	123.11		14	8.05	160	91.95	0.828[2]
Overcommitment										
Yes	96	37.94	64.29 (9.97)	91.20	<0.001*	15	15.63	81	84.38	
No	157	62.06	75.53 (10.64)	148.89		06	3.82	151	96.18	<0.001*[2]
Considered leaving the institution										
Yes	140	55.34	65.91 (10.13)	103.17	<0.001*	15	10.71	125	89.29	
No	113	44.66	73.73 (10.80)	156.52		06	5.31	107	94.69	0.121[2]
Job satisfaction										
Yes	167	66.01	73.74 (9.13)	156.97	<0.001*	04	2.40	163	97.60	
No	86	33.99	60.97 (9.73)	68.81		17	19.77	69	80.23	<0.001*[2]
Able to perform work activities during the pandemic										
Yes	138	54.55	68.20 (10.68)	115.31	0.005*	11	7.97	127	92.03	
No	115	45.45	70.85 (11.51)	141.03		10	8.70	105	91.30	0.835[2]

Legend: SD – standard deviation; QWLQ-bref - Quality of Working Life Questionnaire-bref; [1]Mann–Whitney U test; [2]Pearson's chi-square test of independence; [3]Fisher's exact test; *P-value<0.05.
Source: prepared by the authors (2021).

Concerning the analytical statistics of work-related characteristics and the dichotomized QWL classification, significant associations were found between QWL and the variables overcommitment and job satisfaction. Employees who did not exhibit overcommitment (p<0.001) and those who reported being

satisfied with their work ($p<0.001$) were more likely to present a satisfactory or very satisfactory level of QWL.

DISCUSSION

The findings revealed that employees working remotely during the pandemic had a satisfactory or very satisfactory level of QWL. Age group, lifestyle, and several work-related characteristics were associated with better QWL, particularly higher income, the absence of a smoking history, the absence of overcommitment, and job satisfaction.

Amid the health crisis experienced during the study period, it is worth emphasizing that, although most employees reported positive QWL outcomes, the professional domain warrants particular attention because it had the lowest mean score in the sample. These findings suggest that the pandemic period brought numerous challenges and changes to work routines, which may have negatively influenced the assessment of the professional domain or even masked the reality experienced by employees. Therefore, these results raise concerns about employees' working conditions and highlight the need for further investigations and interventions in the workplace following this period.

In contemporary society, considering that workers generally spend one-third of their lives performing occupational activities, investing in QWL is essential to ensure satisfaction in the workplace and to promote workers' well-being.[2] In this context, occupational health nursing should also play an active role by assessing workplace conditions and implementing preventive and care-related interventions.[13]

Given the direct relationship between age and income, which influences the perception of QWL, an association can be observed between improvements in employees' lifestyles and family life and the satisfaction derived from the job stability provided by the Brazilian public service.[2] In this regard, remote work brought employees closer to their families, allowing them to spend more quality time together, follow their children's development and daily family life, adapt more easily to social isolation and public health measures, and reduce their exposure to the risk of infection. These aspects may have positively contributed to greater personal satisfaction.

Conversely, remote work also imposed a substantial psychological burden due to constant connectivity through work-related digital platforms, the expectation of immediate responses, the extension of work demands beyond regular working hours, and the lack of clear boundaries between work time and personal life. Furthermore, remote work physically separated employees from their teams, making interpersonal relationships more superficial and distant, which may increase social withdrawal and negatively affect well-being.

Regarding the satisfactory or very satisfactory level of QWL among employees younger than 40 years, it should be noted that the institution investigated is relatively new (slightly over 15 years old) compared with other federal universities and is still undergoing an expansion process. Consequently, the institution has experienced continuous renewal of its workforce, resulting in a higher proportion of employees with fewer years of service in the public sector.

Therefore, maintaining healthy lifestyle habits is essential for employees to achieve better quality of life and healthy aging. In this study, satisfactory QWL was associated with a normal BMI classification and the absence of a smoking history. However, not all participants fit this profile, as many presented overweight or obesity, a common condition that considerably affects QWL and increases health-related social costs.[14] Consequently, institutions should employ occupational health nurses to implement health promotion initiatives addressing physical activity, nutrition, and mental health,[6] particularly during periods of home office work, when employees may have greater control over their diet and more time available for physical exercise.

According to the study findings, employees who perceived their health as good or very good, reported not using medications either occasionally or continuously, had not developed new diseases, and had not been absent from work due to illness presented satisfactory levels of QWL. These findings reinforce the direct relationship among health status, absenteeism, lifestyle, and QWL.[15]

Accordingly, it is important to investigate the extent to which diseases—particularly uncontrolled chronic conditions[16] and mental disorders[17]—may affect work life, considering that poorer QWL has been associated with medication use.[18] These health conditions may create an imbalance between work demands, job performance, and professional relationships,[19] negatively affecting productivity.[14] Therefore, accurate diagnosis and effective treatment become increasingly important,[20] as does identifying

workplace hazards and implementing protective measures, while fulfilling the ethical responsibility to safeguard workers' health and avoiding neglect of their well-being.[21, 22]

When Brazilian federal public servants are unable to perform their work duties due to illness, they are entitled to paid medical leave for treatment of their own health condition, allowing them to undergo treatment and recover without financial loss.[23] Therefore, work-related illnesses should be thoroughly investigated to enable structural interventions, including the development or revision of institutional policies aimed at creating safer work environments.[24]

The present study was conducted during the COVID-19 pandemic, a period in which work arrangements underwent substantial changes[8] and employees adopted emergency remote work. During this period, better QWL levels were associated with not developing diseases while working remotely. Nevertheless, it is essential that work teams receive training to recognize occupational health risks arising from new work arrangements.[8,19]

It is noteworthy that, during the pandemic, employees with higher QWL levels reported that they were unable to perform their work activities. This situation was common during that period, as the pandemic had a substantial impact on the mental health of the global population, causing psychological distress and leading to mental disorders, substance abuse, burnout, and impaired quality of life among workers.[7]

However, it is important to recognize that the reality of home office work remains relevant because, even after the pandemic, many employees continue to perform their work remotely, either partially or entirely, following the implementation of the Management and Performance Program. In this context, working from home may alter workers' lifestyles, requiring employers to recognize the conditions under which work is performed and seek alternatives to mitigate adverse effects on employees' health and well-being.[7,25]

As for the different employee categories, faculty members presented higher QWL levels. Many demonstrated commitment and dedication to preventing this reality from negatively affecting their daily lives by adopting mitigating strategies based on their sociodemographic profile,[5] despite the challenges of academic work, stressful routines, and factors that interfere with health and QWL, such as workload overload.[26]

With respect to employees' intention to remain at their institution, several factors may influence this decision. However, the analysis of QWL according to employees' intention to leave the institution indicates that satisfaction and perceived support develop through their experience in the workplace, particularly after completing the probationary period, adapting to their professional role, interacting with colleagues, and becoming integrated into the institution.[27] This finding is consistent with the satisfactory QWL levels observed among employees who had not considered leaving the institution.

In this regard, the importance of social support—characterized by healthy relationships with supervisors and coworkers—is emphasized for maintaining teamwork and ensuring the effective performance of work activities. This support is associated with an adequate work structure, effective communication, cooperation, and feedback discussions, all of which contribute to maintaining work ability.[22,28] Therefore, work ability, job stability, security, fair wages, and interpersonal relationships are all important determinants of QWL.[29]

Accordingly, many authors advocate the development of institutional policies and programs capable of improving the quality of services provided,[14,17,24] including the implementation of mindfulness programs and other stress-reduction and mental health promotion initiatives,[30] providing employees with access to fitness centers or installing exercise equipment in the workplace, and organizing running events and other sports activities within the work environment.[24,31] Furthermore, these programs should undergo periodic assessment to accommodate organizational changes and address employees' evolving needs.[2]

Regarding the study limitations, it should be noted that the investigation did not include the institution's entire workforce, which may have introduced the healthy worker bias and limited the findings to the participating employees, potentially overestimating or masking the true results. In addition, because this was a cross-sectional study based on an online questionnaire, there is a risk of reverse causality bias in the self-reported data.

CONCLUSION

The findings showed that the QWL of employees at the university investigated, who were working under an emergency remote work arrangement during the pandemic, was considered satisfactory or very

satisfactory. This outcome was statistically associated with age group, income, the absence of a smoking history, the absence of overcommitment, job satisfaction, and certain lifestyle, health-related, and work-related factors.

It is important to emphasize that the professional domain presented the lowest mean score in the QWL assessment, suggesting that this dimension may be losing prominence within the balance that characterizes the phenomenon under investigation. Furthermore, it was not possible to determine whether the pandemic had a positive or negative impact on QWL because, although it reduced commuting time and increased the time available for healthy lifestyle habits, it also blurred the boundaries between home and work—which may have adversely affected psychological health—and may have weakened interpersonal bonds among employees due to the lack of daily face-to-face interaction.

In light of these findings, institutions should develop QWL policies and programs based on the actual circumstances and expectations of their employees, while continuously reassessing organizational factors that influence QWL comprehensively, including health-related issues, structural conditions, working hours, employee benefits, well-being at work, and any other factors that may create vulnerabilities for employees.

Accordingly, further studies on QWL at the institution are recommended, particularly to assess employees' adaptation to the return to on-site work, strategies for maintaining hybrid work arrangements under the Management and Performance Program, and the effectiveness of any QWL policies and programs that may be implemented.

CONTRIBUITIONS

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