



## ORIGINALES

### Quality of Life at Work and Public Health: Dimensional Structure of a Scale

Qualidade de vida no trabalho e saúde pública: Estrutura dimensional de uma escala

Calidad de vida en el trabajo y salud pública: Estructura dimensional de una escala

Laelson Rochelle Milanês Sousa<sup>1</sup>  
Elia Campêlo Lago<sup>2</sup>  
Camila Aparecida Pinheiro Landim Almeida<sup>2</sup>  
Maria do Carmo de Carvalho e Martins<sup>2</sup>  
Luana Kelle Batista Moura<sup>2</sup>  
Rafael Fernandes de Mesquita<sup>3</sup>

<sup>1</sup> Graduate Program in Fundamental Nursing, School of Nursing of Ribeirão Preto, University of São Paulo, Ribeirão Preto, São Paulo, Brazil. [laelsonmilanês@gmail.com](mailto:laelsonmilanês@gmail.com)

<sup>2</sup> Professional Master's in Family Health at Centro Universitário UNINOVAFAPI, Teresina, Piauí, Brazil.

<sup>3</sup> Business Administration Course, Federal Institute of Education, Science and Technology of Piauí, Piriá, Piauí, Brazil.

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#### ABSTRACT:

**Objective:** To analyze the dimensional structure of a scale of quality of life at work, used in employees of private companies, aiming at expanding its scope of use.

**Method:** Methodological and quantitative study to analyze the dimensional structure of a quality of life scale at work with workers from private companies in the city of Teresina, Piauí, Brazil. The scale has 48 items with responses on a Likert scale, with 5 points ranging from "totally agree" to "totally disagree". The data were collected by properly trained research assistants. Exploratory Factor Analysis and Confirmatory Factor Analysis were performed to verify the dimensional structure of the scale.

**Results:** 2380 people participated, 52.6% (1251) of the female gender, single 50.2% (1195) and having completed high school 31.7% (754). Cronbach's Alpha with the 48 items was 0.954. The Kaiser-Meyer-Olkin test was greater than 0.7 and the Bartlett sphericity test showed statistical significance. The items were excluded: P8; P13; P15; P19; P24; P30; and P39. The exploratory factor analysis identified eight factors, with 60.4% of the explained total variance. In the analysis of the model's fit, the results were unsatisfactory. Variables P7, P14 and P44 were removed. The proposed new model presented adequate results for all criteria: GFI = 0.943; CFI = 0.957; CMIN / DF = 4,369; and RMSEA = 0.038.

**Conclusion:** The results of the new (adjusted) model showed that the scale is reliable and valid to be used in the context of the private sector.

**Keywords:** Validation Study; Quality of Life; Work.

## RESUMO:

**Objetivo:** Analisar a estrutura dimensional de uma escala de qualidade de vida no trabalho, utilizada em empregados de empresas privadas, visando a expansão do seu escopo de utilização.

**Método:** Estudo metodológico e quantitativo para analisar a estrutura dimensional de uma escala de qualidade de vida no trabalho com trabalhadores de empresas privadas da cidade de Teresina, Piauí, Brasil. A escala possui 48 itens com respostas em escala tipo likert possuindo 5 pontos que variam de "concordo totalmente" para "discordo totalmente". Os dados foram coletados por assistentes de pesquisa devidamente treinados. Foram realizadas Análise Fatorial Exploratória e Análise Fatorial Confirmatória para verificar a estrutura dimensional da escala.

**Resultados:** Participaram 2380 pessoas, 52,6% (1251) do gênero feminino, solteiras 50,2% (1195) e com ensino médio completo 31,7% (754). O Alfa de Cronbach com os 48 itens foi 0,954. O teste de Kaiser-Meyer-Olkin foi superior a 0,7 e o teste de esfericidade de Bartlett apresentou significância estatística. Foram excluídos os itens: P8; P13; P15; P19; P24; P30; e P39. A análise fatorial exploratória identificou oito fatores, com 60,4% da variância total explicada. Na análise do ajuste do modelo os resultados foram insatisfatórios. Foram retiradas as variáveis P7, P14 e P44. O novo modelo proposto apresentou resultados adequados para todos os critérios: GFI = 0,943; CFI = 0,957; CMIN/DF = 4,369; e RMSEA = 0,038.

**Conclusão:** Os resultados do modelo novo (ajustado) evidenciaram que a escala é confiável e válida para ser usada em contexto do setor privado.

**Palavras-chave:** Estudo de validação; Qualidade de vida; Trabalho.

## RESUMEN:

**Objetivo:** Analizar la estructura dimensional de una escala de calidad de vida en el trabajo, utilizada en empleados de empresas privadas, con el objetivo de ampliar su alcance de uso.

**Método:** Estudio metodológico y cuantitativo para analizar la estructura dimensional de una escala de calidad de vida en el trabajo con trabajadores de empresas privadas en la ciudad de Teresina, Piauí, Brasil. La escala tiene 48 ítems con respuestas en una escala Likert, con 5 puntos que van desde "totalmente de acuerdo" hasta "totalmente en desacuerdo". Los datos fueron recopilados por asistentes de investigación debidamente capacitados. El análisis factorial exploratorio y el análisis factorial confirmatorio se realizaron para verificar la estructura dimensional de la escala.

**Resultados:** 2380 personas participaron, 52.6% (1251) del género femenino, solteras 50.2% (1195) y habiendo completado la escuela secundaria 31.7% (754). El Alfa de Cronbach con los 48 ítems fue 0.954. La prueba de Kaiser-Meyer-Olkin fue mayor que 0.7 y la prueba de esfericidad de Bartlett mostró significación estadística. Los ítems fueron excluidos: P8; P13; P15; P19; P24; P30; y P39. El análisis factorial exploratorio identificó ocho factores, con un 60,4% de la varianza total explicada. En el análisis del ajuste del modelo, los resultados fueron insatisfactorios. Se eliminaron las variables P7, P14 y P44. El nuevo modelo propuesto presentó resultados adecuados para todos los criterios: GFI = 0.943; CFI = 0.957; CMIN / DF = 4,369; y RMSEA = 0,038.

**Conclusión:** Los resultados del nuevo modelo (ajustado) mostraron que la escala es confiable y válida para ser utilizada en el contexto del sector privado.

**Palabras-clave:** Estudio de Validación; Calidad de Vida; Trabajo.

## INTRODUCTION

The work refers to the constitution of the individual's personal identity, configuring an important aspect of social recognition, since there is the development of an individual's commitment and engagement in the situations that mobilize him in the work environment. Thus, it goes beyond the sphere of the employment relationship, being composed of challenges and suffering, leading to risks that are often invisible<sup>(1)</sup>. In today's context, relationships in the workplace migrate from disalienation to more organized services, aiming to meet the plans of companies that seek interest in the meaning given to work on a daily basis<sup>(2)</sup>.

In this sense, it can be said that a subject's quality of life involves human relationships with regard to their culture and other aspects, such as health, education, environment,

safety and, especially, work. In an attempt to mitigate the negative impacts of work on workers' health, the concept of quality of life at work has emerged in recent decades, regulating issues such as child labor, weekly rest and compensation for accidents. Over the years, this concept has evolved, becoming the main element related to human and organizational development<sup>(3,4)</sup>.

The concept can also be seen as a comprehensive understanding of living conditions in the occupational sphere, including elements of well-being, health guarantee, physical, mental, social security and training to perform tasks safely and with good use of personal energy<sup>(5)</sup>. The construction of this quality occurs with the perception that the organization and individuals are configured as a whole, promoting the well-being and safety of workers in order to ensure greater productivity and greater satisfaction in personal life<sup>(6,7)</sup>. As well as, globally, a public health issue.

However, the reality of the Brazilian service is marked by a shortage of employees, an exacerbated increase in work, the demand for various skills, and an increase in the demand for more effective and quality work<sup>(1)</sup>. Such a situation ends up generating harmful consequences for the worker's health, such as emotional overload, lack of interest in work, absenteeism and also physical and mental illness, significantly affecting organizational results and public health<sup>(8-10)</sup>.

Among the most consistent theoretical models about quality of life at work, Walton's stands out, based on the subject's perceptions involving aspects such as remuneration, career, integration, work and its guarantees, which are characterized as essential elements in the model. In Walton's perspective, QWL emerges from human and environmental values neglected by societies in favor of technological development, productivity and economic advancement<sup>(2,11)</sup>.

As a concern that involves the context of public health from the consequences of work on individual and social life, implications arising especially from the long journey, given the above, the objective of the study was to analyze the dimensional structure of a quality of life scale at work<sup>(11)</sup>, used in employees of private companies, aiming at expanding its scope of use.

## MÉTODOS

Methodological study of a quantitative approach on quality of life at work with 2380 people, carried out through a survey. The instrument applied has 48 statements related to QWL, built and validated for the Brazilian scenario<sup>(11)</sup>, but tested in the public sector. The expansion of the use of the scale and its possible interpretations constitutes a contribution<sup>(12,13)</sup>.

The instrument's response format is structured on a Likert-type scale with 5 points ranging from "totally agree" to "totally disagree".

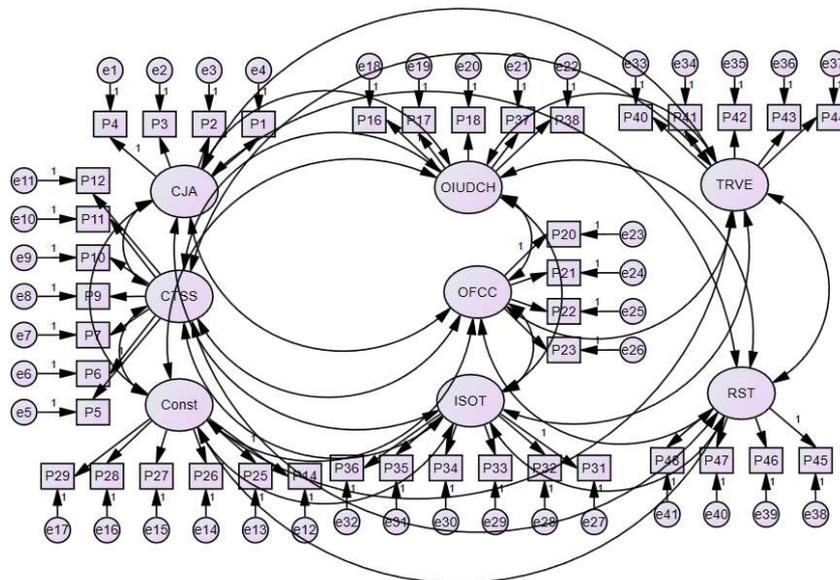
The scale has several dimensions, such as: salary and remuneration, physical environment and security, workload, equipment, health, autonomy, communication, development perspective, interpersonal relationship and interference of work in personal life. All were tested.

The study sample was based on the following parameter: minimum number of ten responses for each variable on the scale, therefore 480 responses<sup>(14)</sup>. However, this sample was expanded considering the number of people employed at the place of the research, more than 300 thousand people were employed in the capital Teresina, Piauí, Brazil, at the time of the survey<sup>(15)</sup>.

Included were people who were employed in private companies in the capital Teresina, Piauí, Brazil, aged 18 years or over. Those with a working time of 6 months or less were excluded. The data were collected by research assistants duly trained for the collection.

Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS) software, using descriptive and inferential statistics modules. For the Confirmatory Factor Analysis (AFC) of the proposed (Figure 1) and recommended (Figure 2) model, the complementary package to SPSS, Analysis of Moment Structures (AMOS) was used.

**Figure 1:** Model proposed on the scale.



The (AFC) is used when the researcher has some knowledge of the model's structure. Based on knowledge of the theory, empirical research, or both, it postulates the relationship between the observed measures and the underlying factors a priori and then tests this hypothesis structure statistically. The models can and must be adapted to find the ideal values of adjustment and validity<sup>(16)</sup>.

Regarding the analysis of the model, the following criteria were used: GFI and CFI greater than 0.90; CMIN/DF less than 5 and RMSEA less than 0.08, to adjust the model. For convergent validity, he used Cronbach's alpha and CR above 0.7, CVA above 0.5 and for discriminant validity, CVA must be greater than MSV and ASV<sup>(14,16,17)</sup>.

Given that the purpose of the article is to use the AFC and thereby recognize the fit of the model and the convergent and discriminant validity of the constructs, an Exploratory Factor Analysis was used and the constructs were recognized as divided

in Table 1. variables P8, P13, P15, P19, P24, P30 and P39, as they were not grouped to any factor.

**Table1. Scale**

P1	My salary is appropriate to my position in relation to other positions in the organization.	Fair and Adequate Compensation - <i>Compensação Justa e Adequada (CJA)</i>
P2	The salary I receive in the organization is fair in relation to that of other organizations for the same position that I occupy.	
P3	My remuneration, given my services rendered at the company, is adequate and meets my needs.	
P4	The benefits offered by the organization are worthwhile.	
P5	Environmental working conditions (lighting, hygiene, ventilation and organization) are adequate.	Safe and Healthy Working Conditions - <i>Condições de Trabalho Seguras e Saudáveis (CTSS)</i>
P6	The health and safety conditions at work for the performance of my activities are satisfactory.	
P7	The workload is adequate.	
P9	My workplace and the equipment used for my activities are in perfect condition.	
P10	Work equipment and materials are quality.	
P11	The organization is concerned with raising awareness and educating employees on the prevention of illness and accidents at work.	
P12	Work equipment and materials are available and in sufficient quantity to carry out my activities.	Constitutionalism – <i>Constitucionalismo (Const)</i>
P16	I have the autonomy to decide how to carry out my work activities.	
P17	I have the opportunity to use creativity at work.	
P18	My job allows me to exercise multiple knowledge and skills, as well as develop new skills.	
P37	I have freedom of expression in the organization.	
P38	I am open to take a stand against the opinions of the organization's superiors.	Immediate Opportunity to Use and Develop Human Capabilities - <i>Oportunidade Imediata para utilizar e Desenvolver as Capacidades Humanas (OIUDCH)</i>
P20	The flow of information between peers is satisfactory.	
P21	I receive feedback from my immediate boss about my work.	
P22	I receive feedback from colleagues about my work.	Future Opportunity for Continuous Growth - <i>Oportunidade Futura para</i>
P23	My job allows me to complete tasks.	
P14	The company offers health care for me and my family.	
P25	The organization conducts training and encourages employee training.	
P26	The organization encourages the qualification of employees (High School, Undergraduate and Graduate).	

P27	The future opportunity is given to apply new knowledge and skills in jobs of greater complexity and responsibility.	<i>Crescimento Contínuo (OFCC)</i>
P28	I feel confident about my future due to the stability I have in the organization.	
P29	The organization has a satisfactory job and salary plan.	
P31	The relationship between superiors and other employees is satisfactory.	<i>Social Integration in the Work Organization - Integração Social na Organização do Trabalho (ISOT)</i>
P32	The relationship between colleagues is satisfactory.	
P33	There is moral support among colleagues, interpersonal openness and respect for individualities.	
P34	There is moral support, interpersonal openness and respect for individualities on the part of the immediate boss.	
P35	Employees have equal treatment and opportunities. No preferences or favorites.	
P36	In the organization, my personal privacy is respected (no one interferes with my life outside the organization).	
P40	There is a balance between my personal and professional life.	<i>Work and its Relevance in the Employee's Life - O Trabalho e sua Relevância na Vida do Empregado (TRVE)</i>
P41	The time I dedicate to my work does not interfere with my personal life.	
P42	The time I dedicate to my personal life does not interfere with my professional activities.	
P43	My time for leisure and physical activities is satisfactory.	
P44	Activities that require night shift schedules, weekends or business trips do not interfere with my family and social life.	
P45	The image I have of the organization is that of a company that provides quality services to the community.	
P46	I see the organization as a company that is concerned with the well-being of its employees and that have them as fundamental to the functioning of the organization.	<i>Social Relevance of Work - Relevância Social do Trabalho (RST)</i>
P47	I am proud to be part of an organization that is recognized for the importance of its activities in this city.	
P48	I am happy to work in an organization that is concerned with the preservation of the environment and sustainability.	

Ethical precepts were respected in accordance with the principles established in the Declaration of Helsinki.

## RESULTS

2380 people participated, 52.6% (1251) identified by female gender. The majority were represented by single persons 50.2% (1195), followed by married marital status 36.7% (874). As for education, most had an incomplete higher education 38.7% (922), followed by those who had completed high school 31.7% (754). These data imply a heterogeneous sample, with numbers close to a half for gender characterization and indicative of marital status.

For multivariate analysis, the reliability of the scale was initially verified using Cronbach's alpha. The evaluation with all variables (48 items) presented a value of 0.954. Before exploratory factor analysis (EFA) was applied, its prerequisites were verified. All correlations between variables showed statistical significance (0.000) with the majority indicating high and positive values. In addition, the anti-image matrix only showed values greater than 0.9, reflecting the high explanatory power of the factors in each of the variables. The Kaiser-Meyer-Olkin test indicated a value greater than 0.7 (recommending) and the Bartlett sphericity test, which shows whether there is a sufficient relationship between the indicators for the application of factor analysis - which is indicated by the rejection of the hypothesis null that the correlations between the variables are null - presented statistical significance.

A cutoff number was established for factorial loads below 0.5, as this is a measure of practical significance that meets at median levels<sup>(14)</sup>. Therefore, loads below these were disregarded for the factor structure and those above them considered ideal, representing the majority among the variables considered<sup>(18)</sup>. This criterion, added to the low communalities (below 0.5), justify the exclusion of some variables from this analysis (They are P8; P13; P15; P19; P24; P30; and P39). The variables P7 and P44 were maintained at this stage, as they presented factor loadings close to the level considered adequate. For merits of statistical significance of the factor load, the values must be based on the sample size and for a load of 0.5, the sample must be greater than 120 observations, which is met in this study, but was not met in the original development scale, which should also have, according to recommendations, at least ten observations for variable<sup>(14)</sup>. For this new factorial solution, the KMO was 0.954 and Bartlett's test remained significant (Sig. 0.000).

The AFE identified eight factors as the chosen solution, with 60.4% of the total variance explained, as well as expanding the scope of the scale, bringing it to the context of the private sector. After this exploratory verification, a Confirmatory Factor Analysis (AFC) was carried out, in order to confirm the dimensional structure of the studied scale and the relationship between the variables and the latent factors, if this supports the hypotheses based on theory.

In the analysis of the fit of the model, the results were unsatisfactory for the criteria established by the literature: GFI = 0.878; CFI = 0.890; CMIN / DF = 8.096; and RMSEA = 0.055. As for convergent and discriminant validity, the model presented problems for extracted variance, with constructs 7F (0.478), 2F (0.491), 3F (0.445) and 6F (0.449) with values less than 0.5.

Thus, a new model was suggested, in which variables P7, P14 and P44 were removed. It is assumed that these variables did not fit the construct due to their statements, the variable P7 was removed for talking about adequate hours, which can be considered immutable or indifferent, since there is labor legislation in favor of standardization, while in addition construct variables speak of working conditions; P14 was initially from another construct, and it is observed that it does not exactly reflect a vision of continuous growth because its statement is associated with the assistance provided to the family; to P44 "activities that require night shifts, weekends or work trips do not interfere in my family and social life" because they address issues related to overtime and do not imply relevance in the employee's life. The proposed new model presented adequate results for all criteria: GFI = 0.943; CFI = 0.957; CMIN / DF

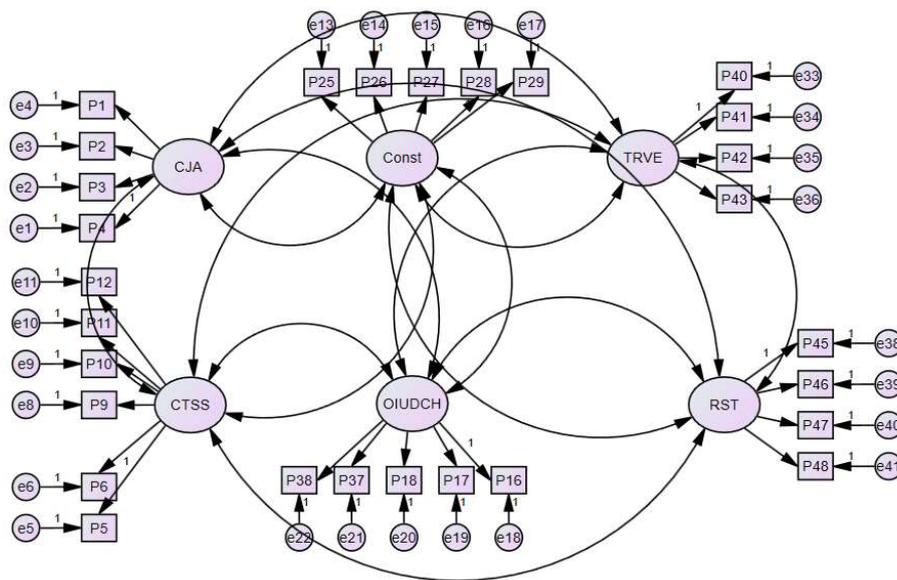
= 4,369; and RMSEA = 0.038. However, for convergent and discriminant validity, two constructs showed values below 0.5 for AVE: 5F (0.480) and 6F (0.429) (Table 1).

**Table 1.** Evaluated model.

Construct	$\alpha$	CR	AVE	MSV	ASV	TRVE	CJA	CTSS	Const	OIUDCH	OFCC	ISOT	RST
TRVE	0,815	0,815	0,524	0,399	0,266	0,724							
CJA	0,861	0,901	0,696	0,389	0,245	0,346	0,834						
CTSS	0,865	0,859	0,505	0,457	0,381	0,509	0,624	0,711					
Const	0,836	0,836	0,507	0,446	0,356	0,434	0,580	0,603	0,712				
OIUDCH	0,807	0,866	0,565	0,514	0,353	0,494	0,410	0,577	0,621	0,752			
OFCC	0,825	0,787	0,480	0,473	0,398	0,538	0,508	0,672	0,668	0,678	0,693		
ISOT	0,828	0,817	0,429	0,514	0,416	0,632	0,455	0,645	0,624	0,717	0,688	0,655	
RST	0,868	0,868	0,622	0,513	0,389	0,602	0,486	0,676	0,618	0,606	0,637	0,716	0,788

Given that the model presented two factors with convergent and discriminant validity below the adequate, a new model was implemented (Figure 2) removing these two factors (i.e. 5F and 6F).

**Figure 2:** Adjusted and recommended model.



The results of this new model showed an adequate adjustment of the model in relation to the criteria attributed by the literature: GFI = 0.962; CFI = 0.971; CMIN / DF = 4,180; and RMSEA = 0.037. Furthermore, for convergent and discriminant validity, the results were also satisfactory (Table 2).

**Table 2.** Recommended model.

Construct	$\alpha$	CR	AVE	MSV	ASV	TRVE	CJA	CTSS	Const	OIUDCH	OFCC
TRVE	0,815	0,814	0,523	0,360	0,236	0,723					
CJA	0,861	0,901	0,697	0,388	0,251	0,346	0,835				
CTSS	0,865	0,859	0,505	0,457	0,365	0,508	0,623	0,711			
Const	0,836	0,835	0,504	0,417	0,339	0,436	0,579	0,605	0,710		
OIUDCH	0,807	0,853	0,539	0,417	0,317	0,501	0,423	0,596	0,646	0,734	
RST	0,868	0,868	0,622	0,457	0,364	0,600	0,484	0,676	0,621	0,619	0,789

## DISCUSSION

This study was developed due to the need to perform the scale's AFC, since the original study that developed the instrument was limited to a sample of 120 individuals<sup>(11)</sup> to the detriment of the recommended<sup>(14)</sup> which establishes 10 participants per item of the instrument. 480 responses would be required to meet statistical requirements. In the present study, the sample was 2380 people and the recommendations and assumptions were respected.

Quality of life at work is a broad and complex concept, comprising several aspects, such as: safe and healthy working conditions, future opportunity for continuous growth, social integration in the organization of work, work and its relevance in the employee's life, fair and adequate compensation, constitutionalism, social relevance of work, immediate opportunity to use and develop human capabilities<sup>(19)</sup>. Therefore, in QLW, human and environmental factors must be considered, as they are forgotten in view of the demand for productivity to the detriment of the employee's well-being<sup>(2,11)</sup>.

When these factors are not considered and respected, QLW is altered and can trigger damage to the physical and mental health of employees, resulting in public health problems. Such damages, in turn, can lead to the triggering of other consequences that will alter professional performance such as your personal satisfaction with work<sup>(20,21)</sup>.

In relation to the dimensions of QWL, the in-depth understanding of each one implies knowledge of which factors are more or less relevant to the worker, in public or private spheres, which need more or less attention from the company and how, specifically, this attention should be targeted. Previous studies in specific sectors of activities have already had this interest and provide accurate information on the situations investigated<sup>(3,4)</sup>.

As for the scale constructs, in Safe and Healthy Working Conditions the variables are related to the workload that involves the work shifts, physical and environmental conditions of the work space and aspects related to unhealthy work<sup>(22)</sup>. Exhaustive work impairs performance and can affect workers' health, as well as leading to broader social problems<sup>(23)</sup>, adequate physical space also contributes to better QLW and can prevent physical dysfunction<sup>(24)</sup>. The variables in this construct that were removed from the scale were: P8, which stated "I have to give extra hours to carry out my activities"; P13: "the organization conducts periodic medical examinations; and P15, "protection and security tools and techniques are used throughout the organization". Their

statements reflect concerns that may have been detailed in the evaluation of employees as they imply legal guarantees and little change between companies.

In the Future Opportunities for Continuous Growth construct, it was necessary to remove two variables (P19 and P24). In P19, "the flow of information between jobs at higher levels to those at lower levels is satisfactory"; and P24, "The activities I do are not common or repetitive. They are interesting and contribute to my development"; the statements do not reflect a vision of continuous growth adjusted to the others and the construct. The construct is important in QVT because it encompasses opportunities for growth in the company that serve as an incentive to the worker from the moment that he perceives opportunities for growth in the company, in addition to growth, job stability is also relevant<sup>(24)</sup>.

Social Integration in the Work Organization is part of the development of workers' skills, opening space for individual prominence inserted in a collective work context<sup>(11)</sup>. The insertion of the worker in their social context of work can reflect in the QLW, since people with better relationships and more skills tend to have better WLW<sup>(20)</sup>. The variable P30, "In the organization there is no prejudice of race, religion, gender, lifestyle, among others", which could be allocated in 'Future Opportunities for Continuous Growth' or 'Social Integration in the Work Organization' according to the results of the analyzes, it was excluded due to the low communalities and factorial loads and for not having adequate adjustment to either construct.

Work and its Relevance in the Employee's Life are extremely important for the balance between life and profession, since work inserts man into society and characterizes him as an individual<sup>(1,11)</sup>. In this dimension, the variable P44 was removed for addressing issues related to overwork.

Fair and Adequate Compensation, on the other hand, is the worker's perception of his responsibilities and the financial return that work provides him for the activity developed, constituting an important factor of job satisfaction<sup>(24)</sup>.

Constitutionalism establishes the legal support of workers through the relationship between unions and companies, labor laws form the basis for the development of QWL by guiding decisions that improve working conditions<sup>(11,25)</sup>. The variable P39, "my labor rights are fully met. The organization fulfills its obligations to employees ", which could be allocated to 'constitutionalism' or 'social relevance of work', was excluded for not presenting itself as relevant according to statistical criteria and its statement.

The Social Relevance of Work is an important source of satisfaction and motivation, as it represents the image of the work and of the employee's company. This construct has a strong influence on QWL, because according to the image of the company and work, the employee may feel motivated or demotivated from a set of characteristics that make up his work<sup>(11)</sup>.

The Opportunity to Use and Develop Human Capabilities is another important construct for QWL, it concerns the freedom of employees to develop actions and improve activities, in addition to being part of management<sup>(24)</sup>.

## CONCLUSION

The results of the new (adjusted) model, through Confirmatory Factor Analysis, showed that this model is suitable for the use of measuring the quality of life at work of workers in the private sector. Therefore, from this article on, new research can use this model to assess the quality of life of private employees and use these results for managerial implications, such as changes in the forms of management and applications of QWL programs, or for implications development of public health programs, given the main considerations regarding the state of the investigated professionals.

## REFERENCES

1. Antloga CS, Carmo MM, Takaki KT. O que é qualidade de vida no trabalho? Representações de trabalhadores de um instituto de pesquisa. Trabalho (En) Cena. 2016; 1(1):132-42.
2. Ferreira CAA, Vasconcelos FCW, Goulart IB, Ituassu CT. A qualidade de vida no trabalho: uma visão crítica dos trabalhadores da saúde mental. Revista Eletrônica Fafit/Facic [Internet]. 2015 [cited 2020 Jan 13]; 6(2):13-30. Available from: <http://www.fafit.com.br/revista/index.php/fafit/article/viewFile/134/75>
3. Parise JA, Soler GAGSG. Qualidade de vida profissional de atendentes de central de telecomunicações. Rev Bras Enferm [Internet]. 2016 [cited 2020 Jan 13]; 69(4):751-6. Available from: <https://www.scielo.br/pdf/reben/v69n4/0034-7167-reben-69-04-0751.pdf>
4. Kaur A. Quality of Work Life. Int J Eng Sci. 2016; 6(7):8305-11.
5. Schmidt DRC, Paladini M, Biato C, Pais JD, Oliveira AR. Qualidade de vida no trabalho e burnout em trabalhadores de enfermagem de Unidade de Terapia Intensiva. Rev Bras Enferm [Internet]. 2013 [cited 2020 Jan 23]; 66(1):13-17. Available from: <https://www.scielo.br/pdf/reben/v66n1/v66n1a02.pdf>
6. Hipólito MCV, Masson VA, Monteiro MI, Gutierrez GL. Qualidade de vida no trabalho: avaliação de estudos de intervenção. Rev Bras Enferm [Internet]. 2017 [cited 2020 Feb 13]; 70(1):189-97. Available from: <https://www.scielo.br/pdf/reben/v70n1/0034-7167-reben-70-01-0189.pdf>
7. Bragard I, Dupuis G, Fleet R. Quality of work life, burnout, and stress in emergency department physicians: a qualitative review. Eur J Emerg Med [Internet]. 2015 [cited 2020 Feb 12]; 22(4):227-34. Available from: <https://pubmed.ncbi.nlm.nih.gov/25093897/>
8. Hosseinabadi R, Karampourian A, Beiranvand S, Pournia Y. The effect of quality circles on job satisfaction and quality of work-life of staff in emergency medical services. Int Emerg Nurs [Internet]. 2013 [cited 2020 Feb 12]; 21(4):264-70. Available from: <https://www.sciencedirect.com/science/article/abs/pii/S1755599X12001280?via%3Dihub>
9. Kasraie S, Parsa S, Hassani M, Ghasem-Zadeh A. The relationship between quality of work life, job stress, job satisfaction and citizenship behavior in oshnaviyeh hospital's staff. Patient Saf Qual Improv [Internet]. 2014 [cited 2020 Jan 21]; 2(2):77-81. Available from: [http://psj.mums.ac.ir/article\\_2520\\_94b841f4612f705ef480a3ff10752649.pdf](http://psj.mums.ac.ir/article_2520_94b841f4612f705ef480a3ff10752649.pdf)

10. Santos AA, Costa ORS. Qualidade de Vida no Trabalho dos Profissionais de Enfermagem que atuam no Período Noturno em um Hospital Escola do Sul de Minas Gerais. *Revista ciências em saúde* [Internet]. 2016 [cited 2020 Mar 13]; 6(1):43-51. Available from: [http://186.225.220.186:7474/ojs/index.php/rcsfmit\\_zero/article/view/453/290](http://186.225.220.186:7474/ojs/index.php/rcsfmit_zero/article/view/453/290)
11. Maia KLS, Araújo RM, Alloufa JML. Qualidade de vida no trabalho sob a ótica de servidores públicos: um estudo de caso em uma empresa pública federal. *Revista Ciências Administrativas* [Internet]. 2012 [cited 2020 Apr 19]; 18(2): 437-84. Available from: <https://periodicos.unifor.br/rca/article/view/3335/pdf>
12. Mesquita RF, Matos FRN. A abordagem qualitativa nas ciências administrativas: aspectos históricos, tipologias e perspectivas futuras. *Revista Brasileira de Administração Científica* [Internet]. 2014 [cited 2020 Jan 5]; 5(1):7-22. Available from: <http://www.sustenere.co/index.php/rbadm/article/view/SPC2179-684X.2014.001.0001>
13. Mesquita RF, Sousa MB, Martins TB, Matos FRN. Óbices metodológicos da prática de pesquisa nas ciências administrativas. *Revista Pensamento Contemporâneo em Administração* [Internet]. 2014 [cited 2020 Feb 5]; 8(1):50. Available from: <https://periodicos.uff.br/pca/article/view/11158/7953>
14. Hair J, Anderson R, Tatham R, Black W. *Análise Multivariada de Dados*. Porto Alegre: Bookman; 2009.
15. IBGE [Internet]. Cidades Teresina. Disponível em: <http://www.cidades.ibge.gov.br/xtras/temas.php?lang=&codmun=221100&idtema=16&search=|s%EDntese-das-informa%E7%F5es>
16. Byrne BM. *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Routledge; 2013.
17. Garver MS, Mentzer JT. Logistics research methods: employing structural equation modeling to test for construct validity. *J Bus Logist* [Internet]. 1999 [cited 2020 Jan 2]; 20(1):33-57. Available from: <https://search.proquest.com/openview/a778d630df6747e2918f1527a34cbd76/1?pq-origsite=gscholar&cbl=36584>
18. Sousa M, Rochelle L, Mesquita RF, Matos FRN, Moura LKB, Moura MEB. Dimensões da satisfação dos usuários da Estratégia Saúde da Família. *Revista Portuguesa de Investigação Comportamental e Social* [Internet]. 2017 [cited 2020 Jan 5]; 3(2):2-9. Available from: <https://rpics.ismt.pt/index.php/ISMT/article/view/50/PDF>
19. Narehan H, Hairunnisa M, Freziamella L. The Effect of Quality of Work Life (QWL) Programs on Quality of Life (QOL) Among Employees at Multinational companies in Malaysia. *Procedia Soc Behav Sci*. 2014; 112.
20. Leite DF, Nascimento DDG, Oliveira MAC. Qualidade de vida no trabalho de profissionais do NASF no município de São Paulo. *Physis* [Internet]. 2014 [cited 2020 Jan 1]; 24(2),507-25. Available from: <https://www.scielo.br/pdf/physis/v24n2/0103-7331-physis-24-02-00507.pdf>
21. Oliveira PM, Limongi-França AC. Avaliação da gestão de programas de qualidade de vida no Trabalho. *RAE Eletrônica* [Internet]. 2005 [cited 2020 Feb 12]; 4(1). Available from: [https://rae.fgv.br/sites/rae.fgv.br/files/artigos/10.1590\\_S1676-56482005000100010.pdf](https://rae.fgv.br/sites/rae.fgv.br/files/artigos/10.1590_S1676-56482005000100010.pdf)
22. Walton RE. Quality of work life: what is it? *Sloan Manage Rev*. 1973; 15(1):11-21.
23. Wirtz A, Nachreiner F. The effects of extended working hours on health and social well-being: A comparative analysis of independent samples. *Chronobiol Int* [Internet]. 2010 [cited 2020 Feb 4]; 27(5):1124-34. Available from: <https://www.tandfonline.com/doi/full/10.3109/07420528.2010.490099>

24. Nanjundeswaraswamy TS, Swamy DR. Quality of worklife of employees in private technical institutions. International journal for quality research [Internet]. 2013 [cited 2020 Jan 4]; 7(3):431-442. Available from: <http://www.ijqr.net/journal/v7-n3/12.pdf>
25. Vasconcelos PH, Alves CEL, Santos SFM, Francisco AC. Qualidade de vida no trabalho docente: um estudo de caso em uma instituição de ensino superior. RAI Revista de Administração e Inovação [Internet]. 2012 [cited 2020 Jan 4]; 9(2):79-97. Available from: <http://www.revistas.usp.br/rai/article/view/79264/83335>

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