

Quality of life of nursing residents in the midst of the COVID-19 pandemic: a descriptive study

Qualidade de vida de residentes de enfermagem em meio à pandemia COVID-19: estudo descritivo

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ABSTRACT

Objective: To evaluate the quality of life of nursing residents in the covid-19 pandemic. **Method:** Cross-sectional, descriptive, quantitative study with 57 nursing residents in the city of Rio de Janeiro, through a questionnaire containing socioeconomic data and the World Health Organization Quality of Life, abbreviated version (WHOQOL-BREF). **Results:** Participants consider having a satisfactory Quality of Life (58.11), data ratified through the interpretation of the Domains that presented a General Score of 53.46, where the Physical Domain was the most satisfactory (58.33) and the Environment (48.63) the least satisfactory. **Conclusion:** Residents had a Satisfactory Quality of Life, however it was noticed that changes in sleep/rest patterns may be directly linked to the decrease in Quality of Life of residents during the pandemic.

Keywords: Coronavirus Infections; Quality of Life; Nursing.

RESUMO

Objetivo: Avaliar a qualidade de vida do residente de enfermagem em meio à pandemia da COVID-19. **Método:** Estudo transversal, descritivo, de abordagem quantitativa com 57 residentes de enfermagem no município do Rio de Janeiro, por meio de questionário contendo dados socioeconômicos e o *World Health Organization Quality of Life*, versão abreviada (WHOQOL-bref). **Resultados:** Participantes consideram possuir uma Qualidade de Vida satisfatória (58,11), dado ratificado através da interpretação dos Domínios que apresentou um Score Geral de 53,46, onde o Domínio Físico foi o mais satisfatório (58,33) e o Meio Ambiente (48,63) o menos satisfatório. **Conclusão:** Os residentes apresentaram uma Qualidade de Vida Satisfatória, contudo percebeu-se que alterações nos padrões de sono/repouso podem estar ligados diretamente à diminuição da qualidade de vida dos residentes durante a pandemia.

Descritores: Infecções por Coronavírus; Qualidade de Vida; Enfermagem.

INTRODUCTION

Since the coronavirus (COVID-19) was identified, its characterization and its potential for large-scale dissemination have promoted a state of attention from authorities in the various health systems worldwide. Following similarly to the global context, after the first confirmed case at the end of January 2020, the others cases rose in Brazil at an increasing and accelerated pace⁽¹⁾. In this context, among the different preventive measures, in the sanitary attempt to contain the transmission, authorities instituted measures to protect and reduce contagion, those being: social isolation, social distancing and quarantine. These may be contributing to psychological suffering, especially health professionals, including residents, who are at the forefront in the fight against COVID-19⁽¹⁻³⁾.

The fear of becoming infected and infecting their families, being away from their loved ones, the uncertainties related to the lack of full knowledge surrounding the disease, the feeling of impotence, the work overload, the lack of personal protective equipment (PPE), the constant contact with infected patients and their clinical status, the high number of deaths, among other factors, the risk of health professionals to present clinical conditions that

manifest themselves in the form of signs and symptoms related to anxiety, depression, sleep disorders and stress increases^(1,3-5).

Studies conducted in several countries emphasize the presence of psychic impairment of health professionals during this pandemic period. A study conducted in China with 1,563 health professionals showed a result of 50.7% of individuals with depressive symptoms, 44.7% with anxiety and 36.1% with insomnia⁽¹⁾.

A similar study also conducted in Chinese territory, with 1,257 participants with nursing professionals (61%) and physicians (39%) showed a total of 72% of those surveyed with symptoms of distress, 50% with symptoms of depression, 45% anxiety and 34% with insomnia⁽⁶⁾. It is noteworthy that these impairments affect the quality of life of these professionals.

The World Health Organization defines quality of life (QoL) as the individual's perception of their position in life, which encompasses physical, psychological health, level of independence, autonomy, beliefs, social relationships and relationship with the environment⁽⁷⁻⁸⁾.

Many health professionals are scheduled in teams to be the front line, and, among these, nurses. In this context, nursing, together with other health professionals, has been at the heart of health systems on a global scale⁽⁴⁾.

In this context, there are health residents, who are graduated professionals, inserted in different services in search of professional qualification. Since the beginning of the residency program, these professionals experience changes in their daily lives that directly interfere with their mental health and quality of life, due to several stressors inherent to the specialization course⁽⁹⁻¹⁰⁾.

Nursing residents, as they are part of the professional category that is responsible for the continuous patient care, daily factors such as long working hours and work overload, precarious conditions in the work environment, low salaries, devaluation of the category, among other factors, which can compromise physical and/or mental health, directly affecting their quality of life⁽¹⁰⁾.

In this sense, studies reveal the importance of actions related to mental health and stressors of health professionals due to the routine and dynamics existing in these scenarios, such as: mental health manuals in the Asian continent, guidelines from psychology associations and councils, such as in Brazil, Spain, the United States, as well as recommendations for mental

health care by the World Health Organization. In Brazil, the strategic action "Brazil Counts on Me – Health Professionals" stands out, on the training and registration of health professionals to face COVID-19^(1,3-5).

Thus, it is necessary to carry out studies focused on the impacts of the pandemic by Covid-19 on people's daily lives, as well as their degree of QoL. Faced with the intense work of the resident nurse during the COVID-19 pandemic, the following question was asked: how does the nursing resident perceive their quality of life working on the front line of COVID-19?

Thus, this research aimed to evaluate the quality of life of nursing residents in the midst of the COVID-19 pandemic.

METHOD

This is a descriptive study with a quantitative, cross-sectional approach. The research was carried out with 57 nursing residents of a Federal Institution of Higher Education, allocated in Federal, Military and Institutes and Municipal hospitals, in Rio de Janeiro. The following inclusion criteria were used: being a nursing resident at the Higher Education Institution where the study was conducted, providing assistance directly to COVID-19 patients and voluntarily agreeing to participate in the research. Exclusion criteria were: being in the first year of the nursing residency course, residents on vacation or on leave for any reason during the data collection period. Data were collected from August to December 2020, through the application of two questionnaires made available in electronic forms of the Google Forms tool via e-mail, in which the invitation and direct access link to the questions and the direct access link were inserted in textual body with participation through the Free and Informed Consent Form (TCLE).

The data collection instrument included data on the direct role in patient care with COVID-19 and the socioeconomic profile of the participants, as well as the quality of life through the Portuguese version of the World Health Organization Quality of Life- BREF (WHOQOL- bref) questionnaire, validated by Fleck et al. in 2000⁽¹⁰⁾.

The WHOQOL-bref is an instrument for assessing quality of life developed by the World Health Organization (WHO), being the abbreviated version of the WHOQOL-100. It consists of a questionnaire composed of 26 questions, two of which focused on the general aspects of quality of life: the first about the individual's perception of his/

her QoL and the second about his/her satisfaction with his/her own health; and 24 other issues, divided into 4 areas. These domains are divided into 24 facets: I-Physical Domain; Domain II-Psychological; Domain III-Social Relationships and Domain IV-Environment. The questions are graded on a Likert scale, and the participant can choose an answer alternative that ranges from 1, lower degree of satisfaction, to 5 points, the highest degree of satisfaction, except for questions 3, 4, and 26, which were necessary to recode the value, where 1 is the highest degree of satisfaction and 5 the lowest degree of satisfaction⁽¹⁰⁻¹²⁾.

For the analysis of the socioeconomic data, a database was created in Excel with the record of all the responses collected and later a table was formulated containing the N - quantitative and percentage of each variable. The data analysis referring to quality of life was carried out using a tool which was built and tested in Microsoft Excel software, version 2007, and that follows the syntax proposed by the WHOQOL group and which automatically calculates the instrument's descriptive statistics scores and prepares graphs from the results⁽⁸⁾. This tool calculates the simple arithmetic mean of the scores of the 26 WHOQOL-bref questions, based on their domains and converts the result into a scale from 0 to 100. In the present study, the mean variant, standard deviation, maximum and minimum were used.

To interpret quality of life data, the following classification of scores was used: Up to 25 = Improving quality of life; Up to 50 = Intermediate Quality of Life; Up to 75 = Satisfactory Quality of Life; Over 75 = Very satisfactory quality of life⁽¹²⁾. Thus, it is understood that the closer to 100, the higher the QoL.

This research respected the ethical precepts involving research with human beings, in accordance with Resolution 466/2012, approved on July 27, 2020 by the Research Ethics Committee of the proposing institution (CAAE 35020720.7.0000.5285; Opinion: 4,174,788).

RESULTS

Of the total number of participants, the majority of women were young adults, single, and of white ethnicity. Most do not live alone and have an average income of 1 to 5 minimum wages, with the residence grant being their main source of support (Table 1).

Table 1 - Sociodemographic profile of residents. Rio de Janeiro, RJ, Brazil, 2020

Variables	N	%
Sex		
F	48	84.2
M	9	15.8
Age (years)		
≤24	6	10.5
≥25	51	89.5
Self-declared ethnicity		
White	25	43.9
Black	13	22.8
Brown	19	33.3
Marital status		
Single	42	73.7
Married	15	26.3
How many people live with you		
Lives alone	5	8.8
One to three	39	68.4
Four or more	13	22.8
Who lives with you		
Lives alone	5	8.8
Mother and/or Father	20	35.1
Spouse	15	26.3
Other	17	29.8
Monthly Family Income		
1 to 5 minimum wages	39	68.4
5 or more minimum wages	18	31.6
City of residence		
Rio de Janeiro	39	68.4
Niterói	6	10.5
Duque de Caxias	3	5.2
São Gonçalo	3	5.2
Other Municipalities	6	10.7

Source: Prepared by the authors, 2020.

Through the evaluation of the socioeconomic profile of nursing residents, there is a predominance of females, aged between 25 and 35 years, who declare themselves white, single, who live with one to three people, mostly mothers and/or father, with a monthly family income of 3 to 5 minimum wages and who live predominantly in the city of Rio de Janeiro.

Table 2 shows that the Physical Domain obtained a more positive evaluation, with an average of 13.33. It is distinguished from the other ones by displaying a low standard deviation (1.74), with a minimum value of 8.57 and a maximum

value of 16.57.

The amplitude of this domain can be seen, since it covers the facet with the highest degree of general dissatisfaction of the participants with regard to "how satisfied are you with your sleep?" On the other hand, in relation to "how much medical treatment do you need to carry out your daily life?", the facet with the highest evaluation was obtained, that is, with the highest degree of satisfaction. Regarding the Domain of Social Relationships, there is an average of 12.94 and the standard deviation of 4.19, which is the highest value found in all domains. It presents a high variation of the data with a minimum value of 4.00 and the maximum value of 20.00.

It is also possible to observe that the Environment Domain has the lowest average of all domains with 11.78, with a standard deviation of 3.23, a minimum value of 5.00 and a maximum value of 18.00.

Regarding the Self-Assessment component, which refers to the conception that each research participant has in relation to their own QoL, obtained an average of 13.30 with a standard deviation of 2.15, varying with a minimum value of 7.54 and a maximum value of 16.31.

In Figure 1, with regard to the physical domain, the facets are presented according to the increasing order of satisfaction: Sleep and rest (36.84); Activities of Daily Life (47.37); Work Capacity (51.32); Energy and Fatigue (56.58); Pain and Discomfort (69.74); Mobility (72.81) and Dependence on Medication or Treatments (73.68). The Psychological Domain (51.46) represented the second group with the highest degree of dissatisfaction. It comprises the facets in ascending order: Spirituality/religion/personal beliefs (48.25); Self-esteem (50.88); Thinking, learning, memory and concentration (51.75); Negative feelings (51.75); Body image (52.63) and Positive feelings (53.51).

The Social Relationships Domain (55.85) repre-

sented the second group with the highest degree of satisfaction among the participants, covering the facets: Sexual activity (49.56); Personal Relationships (54.39) and Social Support (63.60). Regarding the Environment Domain, the environment domain obtained an average score of 48.63, highlighting the one with the most negative evaluation. This domain takes into account eight facets: Physical Security and Protection (50.88), Home Environment (57.02), Financial Resources (64.91), Health and Social Care (40.79), New Information and Skills (40.79), Recreation and Leisure (47.81), Physical Environment (47.81) and Transportation (39.04). The facet that presented the highest degree of satisfaction was related to the sufficiency of financial resources to meet the needs. On the other hand, the facet that assesses satisfaction with the means of transport used was the one with the lowest degree of satisfaction.

The average of the QoL Self-Assessment takes into account the research participant's satisfaction with their health and their judgment regarding their own quality of life, having presented a score of 53.46. Therefore, it is observed that most of the participants consider having a satisfactory QoL.

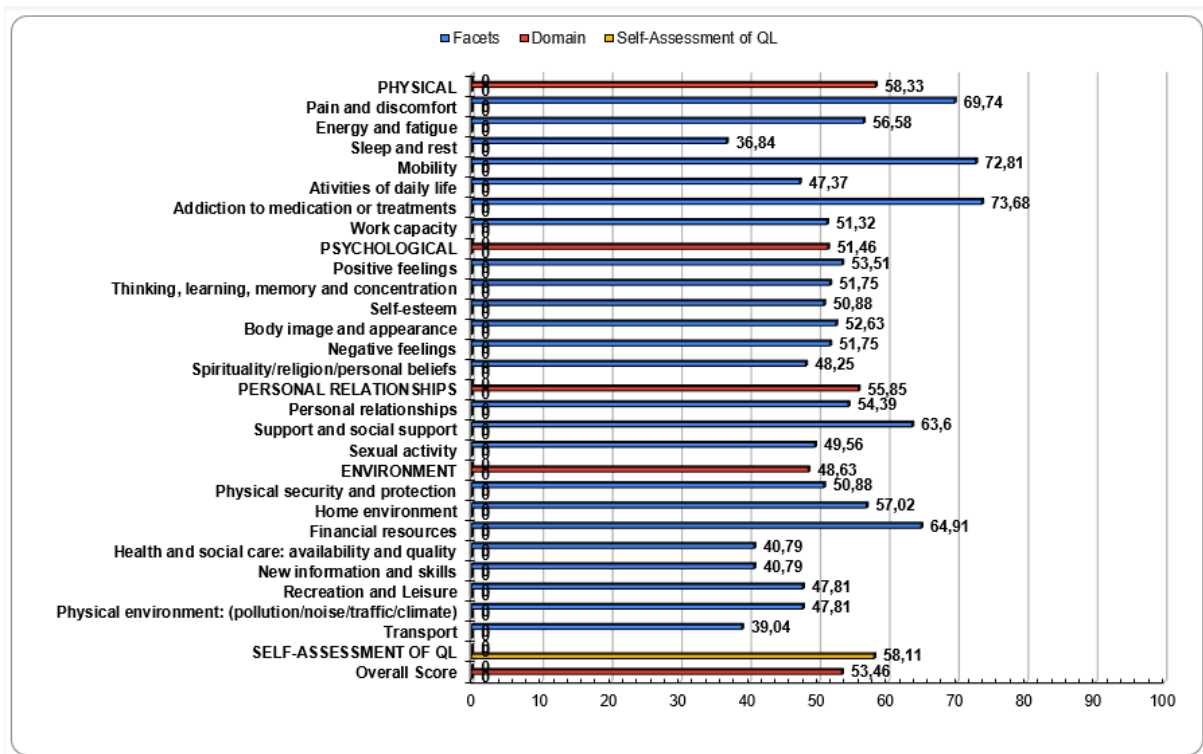
DISCUSSION

Nursing is historically made up of female professionals. This profile has been changing mainly since the 1990s with an increase of males joining the profession. Thus, our results are in line with other studies that identify the nursing workforce as being mostly composed of women⁽¹³⁻¹⁴⁾. However, the profile of young subjects who made up our sample differs from that found among nursing professionals in Brazil, which is mostly composed of the age group of 36 to 50 years⁽¹⁴⁾. This fact is justified by the fact that they are newly graduated professionals who entered the residency in search of technical and scientific

Table 2 - WHOQOOL-bref domains and their statistical variants. Rio de Janeiro, RJ, Brazil, 2020

DOMAIN	AVERAGE	STANDARD DEVIATION	MINIMUM VALUE	MAXIMUM VALUE
Physical	13.33	1.74	8.57	16.57
Psychological	12.23	2.10	7.33	15.33
Social Relationships	12.94	4.19	4.00	20.00
Environment	11.78	3.23	5.00	18.00
Self-assessment of QoL	13.30	3.22	6.00	20.00
TOTAL	12.55	2.15	7.54	16.31

Source: Prepared by the authors, 2020.



Source: Prepared by the authors, 2020.

Figure 1–Self-perception of the quality of life of residents, according to domains and facets of the WHOQOL-bref. Rio de Janeiro, RJ, Brazil, 2020

improvement, an event that explains the data found in the study⁽¹³⁻¹⁴⁾.

Also, with regard to our sample being white, it is known that, taking into account the historical-social context, access to the higher education system in Brazil (undergraduate and graduate) is restricted and is far from ideal⁽¹³⁻¹⁵⁾. In this regard, even though the quota system was instituted to democratize this access, the profile of higher education students in Brazil continues to be mostly composed of a white population^(13,15). The Physical Domain, which is related to sleep/rest, ability to move around, use of medication and the ability to carry out daily and work activities, achieved the best score between the domains. Other studies with health professionals and nursing students demonstrate that these higher scores in this domain contribute positively to quality of life^(7,12).

On the other hand, a descriptive, cross-sectional study with a quantitative approach carried out with 128 residents of a university hospital in São Paulo, from different areas of health, showed that this domain obtained the lowest score, being directly linked to the deficient standards of the facet focused on sleep/comfort⁽¹¹⁾.

It is noteworthy that there was the lowest satisfaction rate for the sleep and rest facet, indicating that some of the residents are unable to supply them. Studies indicate that the deprivation of these needs can lead to worse health and well-being conditions, being directly linked to discouragement, depressive symptoms, decreased professional dynamism, drowsiness, which can cause accidents during care^(6,10,12).

The results indicate that residents have low dependence on the use of medications or treatments to manage their daily lives. On the other hand, a literature review carried out on the chronic use of medications and their adverse effects points out that nursing and health professionals, especially young women, practice self-medication as a form of self-care, using mostly anti-inflammatories and analgesics. This data is worrying, considering that the indiscriminate use of anti-inflammatories in the long term can compromise some systems of our organism, such as: gastrointestinal, renal and cardiovascular systems⁽¹⁶⁾.

Mobility, which is related to the ability to move, represented the second highest evaluation among the facets of this research. Practices of physical and social distancing, especially during

lockdown, when part of the population was isolated in their homes⁽¹⁻³⁾ represented changes in interurban mobility with the decrease in population circulation, which contributed positively to a well-evaluated score⁽¹⁷⁾.

The Psychological domain correlates aspects of concentration capacity, frequency of positive and negative thoughts, satisfaction with self-esteem and mental satisfaction. The pandemic scenario, when linked to mental health, demands special attention from health workers. Exhaustion and emotional effort in caring for patients with COVID-19 can lead to negative feelings and destabilize general well-being^(6-7, 11-10,18).

The Negative Feelings facet, which may be related to the work environment and its performance, indicated that the participants (51.75) had feelings such as anxiety, bad mood, despair and depression at least once. The results show that the nursing resident has difficulty resisting the physical and psychological strain in the work environment. Countries such as China, Germany and the United States have published studies related to the mental health of health professionals associated with these feelings^(1-4,18), which converges with the results of this research. With regard to the pandemic, there is an increase of cases of Common Mental Disorders (CMD), since the appearance of a bad mood or sadness can be a sign of indicative risk for the development of this condition^(1-4,18-19).

The Positive Thoughts, Self-Esteem, Body Image, Lifestyle, Thinking, Learning, Memory and Concentration facets showed a satisfactory degree of QoL. A study that addresses mental health care interventions/actions highlights that countries such as China, the United States and some Europeans have been investing in actions to support these professionals on the front lines of the pandemic⁽³⁾. On the other hand, it shows Brazil's difficulty in adhering to these investments that are related to the use of technology. Another study that addressed the quality of life of nursing professionals in an emergency care unit in the state of Minas Gerais points out that when there is psychological and physical support or not, professionals tend to provide actions that reduce the negative impacts and increase the positive ones^(3,19).

When we come across the facet Spirituality/Religiosity/Personal Beliefs, constituting elements of the subjectivity of individuals, intermediate satisfaction was verified. The coping strategy related to spirituality is common among nurses. There is

a need for understanding and recognition on the part of those who provide health care and deal with human suffering. The professional needs to prioritize the reflection of spirituality regarding its dimension for the promotion of their own health and care improvement⁽¹⁹⁻²⁰⁾.

The Social Relationships Domain covers Interpersonal Relationships, Sexual Relationships and Social Support. The facets addressed in this domain benefit the QoL regarding participation in social activities, leisure activities and dialogues between family and friends. This domain obtained one of the highest scores even though the measures of social distancing, social interaction were expanded by new strategies, such as communication through the internet. The Social Relationships and Social Support scores seem to have been favored by this tool, as they remained above average. The Sexual Relationship facet obtained the lowest score in this domain, with possible interference from this pandemic period⁽¹⁸⁻¹⁹⁾.

The domain that obtained the lowest score in the study was the Environment, classified with an Intermediate degree of QoL. This domain assesses questions related to Physical Safety and Protection, Home Environment, Financial Resources, Health and Social Care, New Information and Skills, Recreation and Leisure, Physical Environment and Transport. A similar cross-sectional study carried out with 224 nursing professionals from six intensive care units in the metropolitan regions of Sorocaba and Campinas, in the state of São Paulo, obtained a similar result with an Intermediate degree of QoL, corroborating the result of this research, despite the lack of publications regarding the theme⁽¹²⁾.

Among the facets that stand out in the Environment domain, we emphasize Transport, which represents the lowest score in the domain and the second lowest among all the facets of the study, and the Financial Resources facet, which has the highest score in the domain.

The Financial Resources facet calls our attention due to its high score, which can be explained by the fact that the vast majority of research participants, despite having a family income of more than three minimum wages, share it with a family group of up to 3 people. The facet that represented the lowest score in the Environment domain, classified as an undetermined degree of QoL, can be explained by the precariousness of the Public Transport service in the city where this study was conducted. It is known that public

transport in large cities directly influences the quality of life of individuals, since the locomotion of the vast majority of the population, both for their work activities and for their leisure, occurs through these. Associated with this, the low quality and quantity of buses offered increase the number of private vehicles on the streets, causing traffic jams in the city and, consequently, increasing commuting time from home to work, which is the reason for the dissatisfaction of the population with the offered service⁽¹⁷⁾.

It is important to emphasize that although social isolation and lockdown have reduced the number of people circulating and using public transport during this pandemic period, the difficulties encountered in moving around the city did not cease to exist, since the bus service was reduced in this period.

The Self-Assessment score of QoL found in the study (58.11) indicates that the research participants classified it as satisfactory. A similar study conducted in the state of São Paulo with nursing professionals from intensive care units resulted in the same classification, but presented a higher overall score (73.33)⁽¹²⁾.

The overall score of this study also classified the residents' QoL as Satisfactory (53.46), the result being very close to the limit between the Intermediate QL grade (up to 50 scores) and very far from the Very Satisfactory grade (above 75 scores). However, even if the pandemic has a personal impact on nursing residents, in general, it does not detract from quality of life.

Study limitations

Among the limitations of the study, the scarcity of available research in which the WHOQOL-BREF questionnaire was applied to the population of nursing residents and the impossibility of comparison with the period prior to the pandemic is highlighted. In view of this, it was necessary to use studies with similar populations to discuss the subject, since the study addresses a current theme aimed at nursing residents inserted in this adverse context. Another limitation found concerns the WHOQOL-BREF instrument and the inability to assess its facets more deeply. Finally, the sample is in a reduced form, which does not allow the generalization of results.

Implications for practice

This study brings the prospect of expanding the field of study on quality of life, mainly related to health professionals in *latosensu* undergraduate programs, contributing in the context of training residency in nursing, and also bringing important considerations for further work to be developed. Regarding care, it can encourage preceptors to develop strategies that contribute to improving the residents' QoL, since a low QoL directly interferes with the care provided.

CONCLUSION

Through the present study, it was possible to evaluate the quality of life of nursing residents in the midst of the COVID-19 pandemic. For such a conclusion, it was necessary to analyze aspects that encompass different fields linked to the perception of nursing residents, such as: psychological, environmental, physical and social relations. On average, residents had a satisfactory quality of life. As for positive factors, the unusual use of medication or medical treatments, satisfaction in mobility capacity and social support are highlighted.

On the other hand, some factors related to sleep/rest patterns were directly linked to a decrease in the residents' QoL. It is important to emphasize that although the general score of this study classified the resident's perception of their QoL as satisfactory in the context of their work on the front lines of COVID-19, it is necessary to develop measures to improve the degree of QoL in nursing residents, due to the proximity with the Intermediate QoL degree and the distance with a very satisfactory degree. In addition, these findings are relevant, as they can guide actions aimed at developing strategies to promote the improvement of quality of life in pandemic contexts, providing improvement to the work environment and psychological support to the resident, preparing them to deal with stress during residence in different scenarios and situations.

CONFLICT OF INTERESTS

The authors have declared that there is no conflict of interests.

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