

# Quality of life of nurses in the operating room

A qualidade de vida dos enfermeiros do centro cirúrgico

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## ABSTRACT

**Objective:** To evaluate the quality of life of operating room nurses and collect their opinions as to the influence their professional activity exerts on their quality of life. **Methods:** This was a cross-sectional study carried out on a sample of 24 nurses that work in the operating room of a large private hospital in the city of São Paulo. Two questionnaires were applied; one was designed by the authors of this research project, and the other was the Quality of Life Questionnaire (WHOQOL-BREF). **Results:** As to quality of life, the environment domain obtained the highest score, while the psychological domain obtained the lowest. When asked if their professional activity in the operating room influenced their quality of life, most responded affirmatively. Regarding the justifications offered by the nurses for the influence of their professional activity on their quality of life, 50% mentioned environment-related stress, responsibilities, duties, risk situations, relationships with the multiprofessional team, and the type of work carried out in the operating room. **Conclusions:** The psychological domain obtained the lowest score in the nurse quality of life evaluation, pointing out the need to facilitate and/or encourage nurses to seek psychological support. As to the influence of their professional activity on their quality of life, the nurses mentioned stress related to their work environment and professional activities in the operating room. This highlights the importance of managers in this area, paying greater attention to the individual and collective needs of their employees.

**Keywords:** Quality of life; Surgery department, hospital/manpower; Nurses; Burnout, professional

## RESUMO

**Objetivo:** Avaliar a qualidade de vida dos enfermeiros do centro cirúrgico e levantar a opinião dos enfermeiros sobre a influência da atividade profissional na sua qualidade de vida. **Métodos:** Foi realizado um estudo transversal em uma amostra de 24 enfermeiros que atuam no centro cirúrgico de um hospital privado, de grande porte, localizado no município de São Paulo. Também foi aplicado um questionário

elaborado pelas autoras da presente pesquisa e o Questionário de Qualidade de Vida (WHOQOL-BREF). **Resultados:** Com relação à qualidade de vida, o domínio meio ambiente obteve o escore mais alto, enquanto o domínio psicológico obteve o escore mais baixo. No que se refere à opinião dos enfermeiros do centro cirúrgico, a respeito da influência da sua atividade profissional no centro cirúrgico na sua qualidade de vida, a maioria respondeu afirmativamente. Quanto às justificativas oferecidas pelos enfermeiros sobre a influência da sua atividade profissional na sua qualidade de vida, 50% referiram estresse relacionado ao ambiente, responsabilidades, obrigações, situações de risco, relacionamentos com a equipe multiprofissional e ao tipo de trabalho desenvolvido no centro cirúrgico. **Conclusões:** O domínio psicológico obteve o escore mais baixo na avaliação da qualidade de vida dos enfermeiros, o que aponta a necessidade de facilitar e/ou estimular os enfermeiros em procurarem suporte psicológico. Com relação a influência da atividade profissional na qualidade de vida, foi mencionado pelos enfermeiros o estresse decorrente do ambiente de trabalho e as atividades profissionais no centro cirúrgico. Observase a importância dos gerenciadores desta área de oferecerem uma atenção maior para as necessidades individuais e coletivas de seus funcionários.

**Descritores:** Qualidade de vida; Centro cirúrgico hospitalar/recursos humanos; Enfermeiros; Esgotamento profissional

## INTRODUCTION

The term “surgery” comes from Greek, *kheirourgia*, and means “manual work”. It may be defined as a specialty aimed to treat conditions and traumas by means of manual and instrumental surgical processes<sup>(1)</sup>.

Ever since the first surgical interventions, marked by limb amputations performed by so-called “barbers,” until today, with technological advancements and the most diverse medical specialties using robotics and state-of-the-art computers in operations, nurses have been present in operating rooms<sup>(2-3)</sup>.

Study carried out at Hospital Israelita Albert Einstein – HIAE, São Paulo (SP), Brazil.

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The operating room (OR) is a unit that involves high technology, and nurses should use work instruments to accompany technological advancements in the healthcare sector, thus enabling greater safety and speed in caring for the surgical patient<sup>(4)</sup>.

The OR is an environment full of diversified situations and expectations that may result in failures or victories, making clear the importance of the work of nurses, who should implement actions based on a planned work process that incorporates a series of integrated steps, thus offering adequate assistance to the patient and surgical team, and fulfilling the needs of the nursing team<sup>(5)</sup>.

The work dynamics, allied with the relationship among the professionals who work in the OR, should happen in a harmonious way, and for this, an integrated effort is vital, with capable and well-prepared professionals, favoring the management of the requirements imposed by the said environment, seeking the patient's safety and well-being<sup>(6)</sup>.

The OR produces physical and mental wear to the nurses who work there, since it is a closed environment with risks, full of norms and routines, which restricts the individual in terms of social interaction. It can, therefore, be considered a unit that has an environmental factor that is, in itself, a generator of stress<sup>(7)</sup>.

The OR nursing professionals have been carrying greater workloads, with an inappropriate ratio of patients to qualified workers, rotating shifts, manipulation of toxic substances, and the presence of risk factor pertinent to the environment, which leads to a situation known as work overload. Consequently, nurses experience a high degree of frustration and discontent as to one's responsibilities and professional work, which may result in physical and psychological disorders that can affect one's health and compromise quality of life<sup>(8)</sup>.

According to the World Health Organization (WHO), quality of life is the "individual's perception of one's position in life in the context of the culture and value system in which one lives and in relation to one's objectives, expectations, standards, and concerns." It is an abstract, subjective, and multidimensional concept, since it involves various aspects of human life such as social relations, health, family, work, environment, among others, and in addition, is dynamic and may be influenced by cultural, religious, ethical, and personal values<sup>(9)</sup>.

Much has been said about seeking quality of life. It corresponds to the perception each one has of oneself at a given moment. The better this perception is, or the more satisfied and happy one is and one's life expectations are met, the more quality of life a person has; considering that quality of life and health walk hand-in-hand, the presence of disease, pain, and lack

of physical or psychological well-being may radically compromise the individual's quality of life<sup>(10,11)</sup>.

Numerous research projects performed on the stress and quality of life of OR nurses indicate that their work characteristics lead to a professional wear and tear as a result primarily of the environment, work overload, relation problems with the multiprofessional team, added to events such as death, suffering and pain. All these factors generate strain and stress in nurses and compromise their quality of life.

In light of this, the objective of carrying out a study on the quality of life of a OR nurse, is due to the need for special attention to be given to the human side of these nurses who work in a unit that is physically and mentally fatiguing besides dealing with their own personal, family, and social responsibilities.

## OBJECTIVE

The objective of this study is to evaluate the quality of life of the nurses who work in the OR and to collect the opinions of the OR nurses, on the influence their professional activity has on their quality of life.

## METHODS

### Study design

This is a quantitative, level 1, exploratory and descriptive study.

A cross-sectional study was performed on a sample of 24 nurses that work in the OR of a large private hospital located in the city of São Paulo. The WHO evaluation instrument on Quality of Life (WHOQOL-BREF) and a questionnaire designed by the authors of this study were applied.

### Setting

This study was developed in the OR of a large private sector hospital in the city of São Paulo that has 24 OR and performs approximately 2,100 procedures per month.

### Sample

The study sample was composed of 24 nurses who work in the OR of a large private hospital in the city of São Paulo, who agreed to participate in the study by signing the informed consent form.

### Data collection instrument

For this study, the brief Portuguese version of the WHOQOL-BREF was used. It was developed by the

Department of Psychiatry and Forensic Medicine of Universidade Federal do Rio Grande do Sul, Porto Alegre, in 1999<sup>(12)</sup>, and comprises 26 questions, two of which are general questions. The WHOQOL-BREF is composed of four domains: physical, psychological, social relations and environment. The full instrument is presented in Appendix A. It was also applied a questionnaire prepared by the authors, which includes sociodemographic questions and one open-ended question, it is presented in Appendix B.

### Data collection procedures

Data collection was performed after approval of the Scientific Committee of Faculdade de Enfermagem of Hospital Israelita Albert Einstein and of the Research Ethics Committee of Hospital Israelita Albert Einstein. Additionally, authorization was requested from the unit in which the data were collected.

The authors agreed to use the data collected only for this research project. The nurses working at the OR were invited to participate in the study, and those who accepted were instructed to sign the informed consent form, were advanced to the next step, which constituted answering the two questionnaires, the WHOQOL-BREF (Appendix A) and the questionnaire drawn up by the authors (Appendix B).

### Data analysis

The results were analyzed based on descriptive statistics (absolute numbers, means, and percentages) and were presented in tables and graphs.

As to the WHOQOL-BREF questionnaire, of the 26 questions answered by each nurse, only 24 items were necessary for the quality of life assessment. These 24 questions were grouped into four domains and the results were synthesized, by applying equations that determine the raw scores (RS), which were further transformed into transformed scores (TS). The maximum and minimum values of the RS possible to be determined in each domain are: domain I – physical, which may have a RS between 7 and 35; domain II – psychological, between 6 and 30; domain III – social, may vary between 5 and 15; and finally, domain IV – environment, that may vary between 8 and 40. In reference to the TS, these suffered no variation in possibly identifiable values; the TS 4-20 will remain between 4 and 20 for all domains and the TS 0-100 will remain between 0 and 100. The evaluation of the results was performed by the means found in RS, TS 4-20 and TS 0-100, thus, the large interval between the individual evaluations of the nurses were not taken into consideration.

## RESULTS

### Social demographic characteristics

In the group of 24 OR nurses studied, ages varied from 22 to 52 years, with a mean age of 34 years. As to gender, 92% were female. In reference to marital status, 58.3% were married, and 50% of nurses had children. Of the total 24 OR nurses, 54.2% had worked for more than five years in it (Table 1).

**Table 1.** Distribution of sociodemographic characteristics of nurses at the operating room

Variable	Category	n	%
Age	22 - 30	7	29.2
	31 - 40	12	50
	41 - 52	5	20.8
Sex	Female	22	92
	Male	2	8
Marital status	Married	14	58.3
	Single	8	33.3
	Living together	1	4.2
	Divorced	1	4.2
	Separated	0	0
	Widow/er	0	0
Children	Yes	12	50
	No	12	50
How long has worked at the operating room	Up to 5 years	3	12.5
	1 to 5 years	8	33.3
	Over 5 years	13	54.2
Total		24	100

As to quality of life, the environment domain obtained the highest score, while the psychological domain had the lowest score, as per Table 2.

**Table 2.** Distribution of results of the quality of life questionnaire – WHOQOL-BREF – of nurses at the operating room

Domain	Raw score	Transformed score 4-20	Transformed score 0-100
Social	11.37	18.95	94.03
Physical	22.70	16.22	81.10
Environmental	27.08	19.33	96.73
Psychological	16.79	13.99	69.97

The scores 0-100 may be interpreted as percentage since they are in a 0 to 100 scale.

Regarding the opinion of the OR nurses as to the influence of their profession activity in the OR on their quality of life, most (79.2%) responded affirmatively (Table 3).

**Table 3.** Distribution of answers given by operating room (OR) nurses regarding influence of their professional activity at the OR in their quality of life

Opinion of OR nurses	n	%
Yes	19	79.2
No	5	20.8
Total	24	100

As to the justifications offered by the OR nurses on the influence of their professional activity on their quality of life, of the total 30 responses given, 50% reported stress related to the sector, responsibilities, duties, risk situations, relationships within the multiprofessional team, and the type of work carried out in the OR (Table 4).

**Table 4.** Distribution of answers given by nurses regarding influence of their professional activity at the operating room (OR) in their quality of life

Opinion of OR nurses on the influence of their professional activity at the OR in their quality of life	n	%
Stress related to the sector, responsibilities, duties, risk situations, relationships within the multiprofessional team, and the type of work carried at the OR	15	50
Stress related to lack of flexible working hours and schedules for work on weekends and holiday, leading to little time for resting, leisure, healthy diet, care with health and participating in family and social events	8	26.7
Positive influence, personal and professional achievement	7	23.3
Total	30	100

## DISCUSSION

In the present study, concerning quality of life, the environment domain obtained the highest score, while the psychological obtained the lowest.

The high score result, in the environment domain in assessing the quality of life of OR nurses in this study, may be related to the fact that the hospital in this study is a large private hospital with a qualified modern structure, that offers its employees some benefits, such as a healthcare plan, transportation service, refresher courses, daycare center for employees' children, and salaries equivalent to or higher than those of the job market.

In reference to the OR nurses' quality of life evaluation, the scores in the environment, social, and physical domains were higher than the results presented in a study with nurses in Chile<sup>(13)</sup>. As regards the psychological domain, both studies showed approximate scores.

The low score in the psychological domain in the quality of life assessment by the OR nurses is in agreement with the results of a study carried out with nursing school residents, in which in the mental component, the emotional, vitality, and mental health aspects were more affected<sup>(14)</sup>.

These results are also similar to those of a study performed with the OR nursing staff of a training hospital in which one of the most affected domains was also that of mental health<sup>(15)</sup>.

The low score in the psychological domain may be related to the psychic suffering that usually is a result of long work shifts, accelerated rhythms of production, repressive and authoritative pressures, absence of or scarce pauses for rest during working hours, fragmentation of tasks, and disqualifying of the work done<sup>(16)</sup>.

Other aspects that may also be related to the low score in the psychological domain in evaluating OR nurses' quality of life include accumulation of two or more jobs, work shifts even on weekends and holidays, hindrance in participation of school, cultural, and social activities, among others, besides being submitted to an excessive mental load at work<sup>(17-18)</sup>.

As to the opinion of nurses of the OR concerning whether their professional activity in it influences their quality of life, most of them responded affirmatively.

Regarding the justifications offered by the OR nurses on the influence of their professional activity on their quality of life, 50% reported "stress related to the sector, responsibilities, obligations, risk situations, relationships within the multiprofessional team, and the type of work carried out in the OR." These results also agree with research projects related to nursing stress, in which five large groups of sources of pressure in the exercise of their activity were identified: administrative, relationships with the medical and nursing team, nursing care given to patients, environment, and personal life<sup>(19)</sup>.

## CONCLUSIONS

The psychological domain obtained the lowest score in the quality of life evaluation of the nurses, which points to the need to facilitate and/or encourage nurses to seek psychological support.

As to the influence of professional activity on their quality of life, the nurses mentioned stress resulting from the work environment and professional activities in the OR. We highlight the importance of managers in this area paying closer attention to the individual and collective needs of their employees.

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**APPENDIX A: WHOQOL-BREF**

Portuguese version of the quality of life evaluation tools.

**INSTRUCTIONS**

This questionnaire is about how you feel about your quality of life, health, or other areas of your life. Please answer all questions. If you are unsure about which response to give to a question, please choose the alternative that appears the most appropriate. It is often the first answer you choose. Please keep in mind your standards, hopes, pleasures and concerns. We ask what you think about your life in the last two weeks. For instance, considering the last two weeks, one question could be:

	Not at all	Very little	More or less	Much	Very much
Do you receive support you need from other people?	1	2	3	4	5

You must circle the number that better corresponds to what you received from others, regarding support in the past two weeks. Hence, you must circle number 4 if you receive ‘very much’ support as shown below.

	Not at all	Very little	More or less	Much	Very much
Do you receive support you need from other people?	1	2	3	4	5

You must circle number 1 if you receive “no support at all”.

Please, read each question, think about and circle the number that you consider the most appropriate.

	Very poor	Poor	Neither poor nor good	Good	Very good
1 How would you rate your quality of life?	1	2	3	4	5

	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Dissatisfied	Very much satisfied
2 How satisfied are you with your health?	1	2	3	4	5

The following questions ask about you have experienced certain things in the last two weeks.

	Not at all	Very little	More or less	Much	Very much
3 To what extent do you feel that physical pain prevents you from doing what you have to do?	1	2	3	4	5
4 How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
5 How much do you enjoy life?	1	2	3	4	5
6 To what extent do you feel your life to be meaningful?	1	2	3	4	5
7 How well are you able to concentrate?	1	2	3	4	5
8 How safe do you feel in your daily life?	1	2	3	4	5
9 How healthy is your physical environment? (climate, noise, pollution, attractions)?	1	2	3	4	5

The following questions ask about how completely you experience or were able to do certain things in the last two weeks.

	Not at all	Very little	More or less	Much	Very much
10 Do you have enough energy for everyday life?	1	2	3	4	5
11 Are you able to accept your bodily appearance?	1	2	3	4	5
12 Do you have enough money to meet your needs?	1	2	3	4	5
13 How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14 To what extent do you have opportunity for leisure activities?	1	2	3	4	5

The following questions ask about how well or satisfied you felt about several aspects of your life in the last two weeks.

	Very poor	Poor	Neither poor nor good	Good	Very good
15 How well are you able to get around?	1	2	3	4	5

	Very dissatisfied	Dissatisfied	Neither dissatisfied nor satisfied	Satisfied	Very satisfied
16 How satisfied are you with your sleep?	1	2	3	4	5
17 How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18 How satisfied are you with your capacity for work?	1	2	3	4	5
19 How satisfied are you with yourself?	1	2	3	4	5
20 How satisfied are you with your personal relationships (friends, relatives, acquaintances, colleagues)?	1	2	3	4	5
21 How satisfied are you with your sex life?	1	2	3	4	5
22 How satisfied are you with the support you get from your friends?	1	2	3	4	5
23 How satisfied are you with the conditions of your living place?	1	2	3	4	5
24 How satisfied are you with your access to health services?	1	2	3	4	5
25 How satisfied are you with your transport?	1	2	3	4	5

The following question refers to how often you have felt or experienced certain things in the last two weeks.

	Never	Seldom	Quite often	Very often	Always
26 How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

Did anyone help you filling out this questionnaire?

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How long did you take to fill out the questionnaire?

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Do you have any comments about the questionnaire?

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Thanks for your collaboration.

**APPENDIX B: QUESTIONNAIRE**

Age: \_\_\_\_\_ Sex  M  F

Marital status:  single  married  widow/er  
 separated  living together  divorced

Children:  yes  no

How long have you worked at the operating room?  
 up to one year  1 to 5 years  over 5 years

In your opinion, does your professional activity at the operating room influence your quality of life? Explain your answer.  
 yes  no

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