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Moral sensitivity of nurses in a university hospital in southern Brazil

Sensibilidade moral de enfermeiros em um hospital universitário do sul do Brasil

Sensibilidad moral de enfermeros en un hospital universitario del sur de Brasil

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ABSTRACT

Objective: to analyze the moral sensitivity of nurses while facing ethical conflicts at the professional practice and verify their association with sociodemographic and labor-related variables.

Method: cross-sectional study, carried out with 115 nurses from a university hospital of southern Brazil. The *Moral Sensitivity Questionnaire* - Brazilian Version was applied from April to May 2023. Descriptive and analytical statistics were used to analyze the data.

Results: the mean of the nurse's total moral sensitivity score was 3.49 (SD=0.36). The lowest score levels of moral sensitivity were related to the constructs “modified autonomy” (2.48; SD=1.08) and “meaning of the moral structure” (3.46; SD=0.66), while the highest levels were associated with the constructs “respect for patient autonomy" (3.90; SD=0.85) and "experiencing moral conflict" (3.59; SD=1.02). The constructs “modified autonomy” and “meaning of moral structure” were statistically significant regarding the association with the number of employment contracts, work shift and weekly hours worked (p=0.045, p=0.034, and p=0.044, respectively).

Conclusion: nurses exhibit moderate levels of moral sensitivity, and aspects of work are related to the ability to recognize and act on ethical problems.
Descriptors: Moral; Ethics; Ethics in nursing; Moral development.

RESUMO
Objetivo: analisar a sensibilidade moral de enfermeiros frente aos conflitos éticos da prática, e verificar sua associação com variáveis sociodemográficas e laborais.
Método: estudo transversal, realizado com 115 enfermeiros de um hospital universitário no sul do Brasil. Aplicou-se o *Moral Sensitivity Questionnaire* -Versão Brasileira, no período de abril a maio de 2023. Empregou-se estatística descritiva e analítica para análise.
Resultados: a média total de sensibilidade moral dos enfermeiros foi de 3,49 (DP=0,36). A menor média foi do fator "autonomia modificada" (2,48; DP=1,08) e a mais alta do fator "respeito à autonomia do paciente" (3,90; DP=0,85). Os fatores "autonomia modificada" e "significado da estrutura moral" foram associados ao número de vínculos empregatícios, turno de trabalho e horas semanais trabalhadas (p=0,045, p=0,034 e p=0,044, respectivamente).
Conclusão: os enfermeiros apresentam moderados níveis de sensibilidade moral e aspectos do trabalho se relacionam à capacidade de reconhecer e intervir sobre problemas éticos.
Descritores: Moral; Ética. Ética em enfermagem; Desenvolvimento moral.

RESUMEN
Objetivo: analizar la sensibilidad moral de los enfermeros frente a los conflictos éticos en la práctica profesional y verificar su asociación con variables sociodemográficas y laborales.
Método: estudio transversal, realizado con 115 enfermeros de un hospital universitario del sur de Brasil. El *Moral Sensitivity Questionnaire* - Versión Brasileña se aplicó en el periodo desde abril hasta mayo de 2023. Para analizar los datos se utilizó estadística descriptiva y analítica.
Resultados: la puntuación media de sensibilidad moral total de las enfermeras fue de 3,49 (DE = 0,36). Los niveles de puntuación más bajos de sensibilidad moral se relacionaron con los factores "autonomía modificada" (2,48; DE=1,08) y "significado de la estructura moral" (3,46; DE=0,66), mientras que los niveles más altos se asociaron con los factores "respeto por autonomía del paciente" (3,90; DE=0,85) y "experimentar conflicto moral" (3,59; DE=1,02). Los factores "autonomía modificada" y "significado de la estructura moral" fueron estadísticamente significativos en cuanto a la asociación con el número de relaciones laborales, turno de trabajo y horas semanales trabajadas (p=0.045, p=0.034 y p=0.044, respectivamente).
Conclusión: los enfermeros presentan niveles moderados de sensibilidad moral, y los aspectos del trabajo se relacionan con la capacidad de reconocer e intervenir en los problemas éticos.
Descriptores: Moral; Ética; Ética en enfermería; Desarrollo moral.

INTRODUCTION

The principles that underpin nursing are closely linked to the integrity and well-being of patients. Therefore, nursing practice must be guided by ethics, which supports all actions and decisions of nurses when facing ethical dilemmas and conflicts, advocating in favor of patients[1].

Ethical problems and dilemmas are frequent in the professional practice of nurses in

various contexts. In the hospital environment, they arise when actions considered correct are confronted, challenging the professional principles of the nurse and their duty, with a negative impact on professionals, patient care and the institution[2,3].

A study conducted in three Chinese hospitals highlighted the lack of awareness about protecting patient privacy, violation of patient autonomy, inadequate communication, negligence in safeguarding the patient's best interests, and low moral sensitivity, among others, as the main ethical problems. The study also emphasized that ethical behavior can be strengthened through discussions about ethics among nurses, which favors the development of their professional identity and the appreciation of their social status[4].

Moral sensitivity is an important resource for facing these challenges, as it functions as a subjective tool that helps nurses identify ethical problems in hospital care and make ethical decisions for the benefit of patients. It involves recognizing vulnerabilities and the potential impacts of decisions, that is, awareness of one's responsibility and the consequences of actions in the face of ethical conflicts[5].

Moral sensitivity is the starting point for nurses' moral competence, being effective in professional performance and in the development of communication between nurses and patients[6]. It increases nurses' awareness of the responsibilities and moral consequences of decisions and improves the quality of nursing care and the effective management of ethical challenges[7].

Some elements play a fundamental role in the development of nurses' moral sensitivity, such as empathy, dialogue, clinical decision-making, attention to patients' needs, respect, acceptance of their wishes, and guidance in the face of their requests and refusals. These factors contribute to the ethical training of professionals, helping them to make more conscious and assertive decisions when faced with conflicts that emerge in the clinical environment[8].

In 1995, Swedish nurses developed the self-administered Moral Sensitivity Questionnaire (MSQ) to assess moral sensitivity. Originally composed of 30 statements on a seven-point Likert scale, the MSQ covers six factors: interpersonal orientation, structuring moral meaning, benevolence expressed, modified autonomy, experience of moral conflict, and trust in medical and nursing knowledge. The instrument was adapted to the Brazilian context in 2021, giving rise to the MSQ – Brazilian version (MSQ-VB), which contains 17 questions on a five-point scale and addresses six factors: respect for patient autonomy, modified

autonomy, experiencing moral conflict, trust in medical and nursing knowledge, meaning of moral structure, and teamwork[9] .

As the object of this study, moral sensitivity is justified because it is an essential capacity for recognizing ethical problems in nursing care settings, directly influencing the quality of care provided and the well-being of patients. Given the complexity of ethical problems that permeate care practice, moral sensitivity is essential to guide informed and responsible ethical decisions [9]. Thus, the present study can contribute to fostering reflection on the need for educational strategies that promote moral sensitivity, both in academic training and in professional Nursing practice, aiming at ethical and humanized care.

Given the above, this study aims to answer the following research question: what are nurses' moral sensitivity levels when faced with ethical conflicts in hospital care practice and their association with sociodemographic and work variables? And, as objectives, to analyze the moral sensitivity of nurses when faced with ethical conflicts in their practice, and to verify their association with sociodemographic and work variables.

METHOD

This is a cross-sectional study reported according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines [10].

The research setting was a large general university hospital in southern Brazil, which is considered a reference both for the metropolitan region where it is located and for the state.

Electronic data collection was performed from April 10 to May 26, 2023, by a ninth-semester undergraduate nursing student and the research coordinator. The inclusion criteria were nurses assigned to the institution selected for the study with at least one year of experience in a hospital setting. The exclusion criteria included professionals on leave of any nature in accordance with labor regulations or on vacation during the data collection period.

All nurses at the institution who met the inclusion criteria were approached in person, at their work locations and shifts, and those who expressed interest provided their email address to receive information about the research. A link was sent to participants so they could access the data collection instrument via Google Forms.

The population consisted of 165 nurses affiliated with the institution. A sample size calculation for a finite population was performed using the Winpepi computer program, version 11.65. A confidence level of 95%, a margin of error of 0.1 units and a standard deviation of one unit were considered, resulting in a sample of 115 participants. Convenience sampling was

used.

The data collection instrument comprised a characterization section, containing sociodemographic and labor variables - gender, additional education, number of employment contracts and weekly workload - and the MSQ-VB, validated in the Brazilian context for assessing moral sensitivity, consists of 17 items measured on a five-point Likert scale, with 1 for “I completely disagree”, 2 for “I disagree more than I agree”, 3 for “I neither disagree nor agree”, 4 for “I agree more than I disagree” and 5 for “I completely agree”. The MSQ-VB has six factors, which are: respect for patient autonomy (4 items); modified autonomy (2 items); experiencing moral conflict (3 items); trust in medical and nursing knowledge (3 items); moral structural meaning (3 items); and teamwork (2 items). Moral sensitivity is analyzed through the average of its factors, with higher averages indicating greater moral sensitivity[9]. However, a division of the variable was considered for the study in which average values up to 2.00 would be classified as low moral sensitivity, from 2.01 to 3.99 as moderate, and above 4.00 as high, similar to the classifications adopted in other scenarios[11-12].

The factor “respect for patient autonomy” expresses the relationship of trust between nurse and patient, aiming to meet the patient’s needs; “modified autonomy” refers to decisions made by the nurse that, in certain situations, may limit the patient’s autonomy to safeguard their integrity or that of third parties; “experiencing moral conflict” refers to the identification of moral conflict through the nurse’s intuition and perception, expressing moral sensitivity in action; “trust in medical and nursing knowledge” involves the conviction of the need for multidisciplinary knowledge when facing ethical conflicts; “meaning of the moral structure” deals with the processes used to attribute moral meaning to decisions and actions taken for the benefit of the patient; and, “teamwork” comprises the coordination and cohesion of different professionals and knowledge for adequate patient care[9].

The collected data were exported via Microsoft Excel® spreadsheet and analyzed using SPSS statistical software version 25 (Statistical Package for the Social Sciences). The sociodemographic variables and questionnaire items were represented by descriptive statistics, including measures of central tendency and dispersion for quantitative variables and analysis by absolute and relative frequency in the case of categorical variables. The Shapiro-Wilk normality test was used to verify the normal distribution of the data, from which it was obtained that all domains were significant, classifying the distributions as asymmetric. Thus, the quantitative variables were represented by the median (P50) and interquartile ranges [P25; P75], in addition to the means and standard deviations, minimum and maximum.

For asymmetric variables, the distribution of factors was compared with sociodemographic and labor variables using the Mann-Whitney test (for variables with two groups) or the Kruskal-Wallis test (for variables with three or more groups). When significant, the latter had its categories compared using Dunn's pairwise (post-hoc) test. The significance level adopted was 5% (p-value ≤ 0.05).

The research project was submitted for assessment and approval by the Teaching and Research Management (GEP) of the institution, and was approved (according to Consolidated Opinion No. 5,969,541 and CAAE No. 67146022.0.0000.0121) by the local Research Ethics Committee involving Human Beings. Therefore, respect for the ethical principles of beneficence, non-maleficence, autonomy, justice and equity, and other ethical guidelines contained in Resolution nº 466, of December 12, 2012 of the National Health Council, was ensured.

In the data collection form, when clicking on the link, participants were directed to the Free and Informed Consent Form (FICF), previously signed by the researchers. If they agreed to participate, they should mark the "Yes" option in the checkbox, indicating that they had read the document and obtained all the necessary information to participate in the research freely and spontaneously. Only after this confirmation were they given access to the data collection instrument.

RESULTS

115 nurses participated in the study. The sociodemographic characteristics of the participants are summarized in Table 1 below. Women represented 84.3% of the sample, 53.9% were participants with specialization, 90.4% were participants with only one employment contract, and 41.7% of them work in the morning shift. Most of these nurses work a 36-hour weekly schedule (56.5%).

Table 1 – Sociodemographic and work characteristics of nurses. Florianópolis, SC, Brazil. 2023 (n=1 15)

Variable	n (%)
Gender	
Female	97 (84.3)
Male	18 (15.7)
Education	

PhD	11 (9.6)
Master's degree	42 (36.5)
Postgraduate studies	62 (53.9)
Number of employment contracts	
1 link	104 (90.4)
2 links	11 (9.6)
Work shift	
Morning	48 (41.7)
Night	24 (20.9)
Afternoon	43 (37.4)
Weekly hours worked	
30 hours	38 (33)
36 hours	65 (56.5)
40 hours	6 (5.2)
Overtime/APH*	6 (5.2)

Sources: Survey data, 2023

*APH - On-call availability supplement

In Table 2, the mean moral sensitivity among nurses was 3.49, with a standard deviation (SD) of 0.36. The lowest means of moral sensitivity among nurses were related to the factors "modified autonomy" (Mean 2.48 with SD 1.08) and "meaning of moral structure" (Mean 3.46 with SD 0.66). As for the highest means, they were associated with the factors "respect for patient autonomy" (Mean 3.90 with SD 0.85), "experiencing moral conflict" (Mean 3.59 with SD 1.02) and "confidence in medical and nursing knowledge" (Mean 3.53 with SD 1.09).

Table 2 – Description of the statistics of each factor of the Moral Sensitivity Questionnaire - Brazilian Version (MSQ-VB) and of the total moral sensitivity. Florianópolis, SC, Brazil. 2023 (n=1 15)

	mean (SD)	**Median [P25; P75]**	**min-max**
Total Moral Sensitivity	3.49 (0.36)	3.47 [3.24; 3.76]	2.76 - 4.41

Respect for patient autonomy	3.90 (0.85)	3.75 [3.25; 4.50]	2.25 - 5.00
Modified autonomy	2.48 (1.08)	2.00 [2.00; 3.50]	1.00 - 4.50
Experiencing moral conflict	3.59 (1.02)	3.67 [3.33; 4.33]	1.00 - 5.00
Trust in medical and nursing knowledge	3.53 (1.09)	3.67 [2.67; 4.33]	1.33 - 5.00
Meaning of moral structure	3.46 (0.66)	3.33 [3.00; 4.00]	2.33 - 5.00
Teamwork	3.58 (0.74)	3.50 [3.00; 4.00]	2.00 - 5.00

Source: Survey data, 2023

According to Table 3 below, the description of the frequencies of each factor of the questionnaire and its respective items can be observed. It is noted that in the factor "respect for patient autonomy" most participants partially or totally agreed with the items presented in the questions, as well as in the factors "experiencing moral conflict" and "trust in medical and nursing knowledge", which had the highest rates of moral sensitivity. However, in the factor "modified autonomy most participants chose to totally or partially disagree with the items presented in the questions, characterizing the factor with the lowest rates of moral sensitivity.

Table 3 – Description of the frequencies of responses to each item of the Moral Sensitivity Questionnaire - Brazilian Version (MSQ-VB) in their respective factors. Florianópolis, SC, Brazil. 2023 (n=115)

Scoring/Questions	**1 and 2**	**3**	**4 and 5**
	n(%)	**n(%)**	**n(%)**
Factor 1: Respect for patient autonomy			
q7. I believe that good nursing care always includes respect for the patient's personal choices.	24 (20.9)	8 (7)	83 (72.1)
q22. I believe that good nursing care includes patient participation.	11 (9.6)	9 (7.8)	95 (82.6)
q25. I find it difficult to provide good nursing care against the patient's will.	41 (35.7)	25 (21.7)	49 (42.6)
q6. When I have to make difficult decisions regarding my patient, it is important that I always be honest with him.	11 (9.8)	14 (12.5)	87 (77.7)
Factor 2: Modified autonomy			
q15. I base my decisions on professional knowledge regarding what is best for the patient even if the patient protests.	80 (70.1)	6 (5.3)	28 (24.6)
q.4. When a decision needs to be made that goes against a patient's wishes, I speak in accordance with what I believe is best for the patient.	49 (42.6)	31 (27)	35 (30.4)

Factor 3: Experiencing moral conflict			
q11. I often face situations where it is difficult to know what action is ethically correct for the patient.	29 (25.9)	28 (25)	55 (49.1)
q9. I often face conflicting situations about how to approach a patient.	31 (27)	11 (9.6)	73 (63.4)
q14. I often face situations where it is difficult to allow the patient to make their own choices.	24 (20.8)	10 (8.7)	81 (70.5)
Factor 4: Confidence in medical and nursing knowledge			
q28. I trust my own emotions when I have to make a difficult decision for the patient.	18 (15.6)	0 (0)	97 (84.4)
q26. There are situations where there is good reason to intimidate a patient with an injection if oral medication is refused.	79 (68.6)	7 (6.1)	29 (25.3)
q20. My practical experience is more useful than theoretical knowledge in situations where I have to choose what is ethically correct.	21 (18.3)	11 (9.6)	83 (72.1)
Factor 5: Significance of Moral Structure			
q10. I believe it is important to have solid principles about nursing care provided to patients.	18 (15.6)	12 (10.4)	85 (73.9)
q5. If I lost my patient's trust, my work would have less meaning.	20 (17.5)	12 (10.5)	82 (72)
q18. It is the patient's reaction that shows me how right I made the decision.	56 (48.7)	28 (24.3)	31 (27)
Factor 6: Teamwork			
q27. In situations where it is difficult to know what is ethically appropriate, I consult with my colleagues about what should be done.	1 (0.9)	6 (5.2)	108 (93.9)
q17. I rely on the knowledge of other colleagues when I am unsure of what to do.	55 (48.7)	31 (27.4)	27 (23.9)

Sources: Survey data, 2023
Legend: 1 for "I completely disagree", 2 for "I disagree more than I agree", 3 for "I neither disagree nor agree", 4 for "I agree more than I disagree" and 5 for "I completely agree".

Table 4 presents the results of the comparisons between the independent variables with the factors "respect for patient autonomy", "modified autonomy" and "experiencing moral conflict".

Table 4 – Comparison between the distributions of the factors "Respect for patient autonomy", "Modified autonomy" and "Experiencing moral conflict" among the groups of the independent variables studied. Florianópolis, SC, Brazil, 2023 (n= 115)

	Respect for patient autonomy	**Modified autonomy**	**Experiencing moral conflict**
Sex[1]			
Female (n=97)			

mean (SD)	3.84 (0.84)	2.53 (1.05)	3.55 (0.97)
Median[P25; P75]	3.75 [3.25; 4.50]	2.00 [2.00; 3.00]	3.67 [3.33; 4.00]
min-max	2.25; 5.00	1.00; 4.50	1.00; 5.00
Male (n=18)			
mean (SD)	4.22 (0.83)	2.22 (1.26)	3.83 (1.23)
Median [P25; P75]	4.63 [3.75; 5.00]	2.00 [1.00; 3.50]	3.83 [3.33; 5.00]
min-max	3.00; 5.00	1.00; 4.50	1.67; 5.00
p-value	0.061	0.205	0.274
Education[2]			
PhD (n=11)			
mean (SD)	4.34 (0.98)	2.50 (1.07)	3.79 (1.22)
Median [P25; P75]	5.00 [3.50; 5.00]	3.00 [1.50; 3.00]	3.67 [3.67; 5.00]
min-max	2.25; 5.00	1.00; 4.00	1.67; 5.00
Master's Degree (n=42)			
mean (SD)	3.74 (1.01)	2.36 (1.02)	3.65 (0.85)
Median [P25; P75]	3.50 [2.75; 5.00]	2.00 [2.00; 3.00]	3.67 [3.33; 4.00]
min-max	2.25; 5.00	1.00; 4.50	1.67; 5.00
Specialization(n=62)			
mean (SD)	3.93 (0.68)	2.56 (1.13)	3.52 (1.09)
Median [P25; P75]	3.75 [3.25; 4.50]	2.00 [2.00; 3.50]	4.00 [2.33; 4.33]
min-max	2.50; 5.00	1.00; 4.50	1.00; 5.00
p-value	0.091	0.743	0.874
Number of employment contracts[1]			
1 link (n=104)			
mean (SD)	3.91 (0.89)	2.55 (1.08)	3.57 (1.04)
Median[P25; P75]	4.25 [3.13; 4.75]	2.00 [2.00; 3.50]	3.67 [3.17; 4.17]
min-max	2.25; 5.00	1.00; 4.50	1.00; 5.00
2 links (n=11)			
mean (SD)	3.82 (0.20)	1.82 (0.84)	3.79 (0.79)
Median [P25; P75]	3.75 [3.75; 4.00]	2.00 [1.00; 2.50]	4.00 [3.67; 4.33]

min-max	3.50; 4.25	1.00; 3.00	2.33; 4.67
p-value	0.659	**0.045**	0.337
Work shift[2]			
Morning (n=48)			
mean (SD)	4.21 (0.86)	2.77 (1.14)	3.62 (1.11)
Median [P25; P75]	4.50a [3.75; 5.00]	2.50a [2.00; 4.00]	3.67 [2.83; 4.67]
min-max	2.25; 5.00	1.00; 4.50	1.67; 5.00
Afternoon (n=43)			
mean (SD)	3.47 (0.66)	2.41 (1.09)	3.50 (0.97)
Median [P25; P75]	3.25b [3.00; 3.75]	2.00ab [1.50; 3.50]	3.67 [3.33; 4.00]
min-max	2.50; 5.00	1.00; 4.50	1.00; 5.00
Night (n=24)			
mean (SD)	4.04 (0.84)	2.04 (0.76)	3.71 (0.92)
Median [P25; P75]	4.29a [3.25; 4.88]	2.00b [1.50; 2.75]	4.00 [3.00; 4.00]
min-max	2.50; 5.00	1.00; 3.50	2.00; 5.00
p-value	**0.001**	**0.034**	0.449
Weekly hours worked[2]			
30 hours (n=38)			
mean (SD)	4.29 (0.87)	2.87 (1.13)	3.39 (1.15)
Median [P25; P75]	4.50a [3.75; 5.00]	3.00a [2.00; 3.50]	3.67 [2.33; 4.67]
min-max	2.25; 5.00	1.00; 4.50	1.00; 5.00
36 hours (n=65)			
mean (SD)	3.69 (0.74)	2.33 (1.02)	3.65 (0.93)
Median [P25; P75]	3.75b [3.25; 4.33]	2.00b [1.50; 3.00]	4.00 [3.67; 4.00]
min-max	2.50; 5.00	1.00; 4.50	1.00; 5.00
40 hours (n=6)			
mean (SD)	3.33 (0.85)	1.83 (0.41)	4.06 (0.53)
Median [P25; P75]	2.88 b [2.75; 4.00]	2.00b [2.00; 2.00]	3.83 [3.67; 4.33]
min-max	2.75; 4.75	1.00; 2.00	3.67; 5.00
APH overtime (n=6)			

mean (SD)	4.25 (0.99)	2.33 (1.37)	3.83 (1.31)
Median [P25; P75]	4.75ab [3.00; 5.00]	2.00ab [1.00; 4.00]	4.00 [3.33; 5.00]
min-max	3.00; 5.00	1.00; 4.00	1.67; 5.00
p-value	**0.001**	**0.044**	0.395

Source: 2023 survey data
Legend: 1. Mann-Whitney test; 2. Kruskal-Wallis test. When significant, Dunn's pairwise (post-hoc) test was used.

Letters a, b, ab: same letters, no difference in numbers; different letters, difference exists.

As shown in Table 4, the distribution of the factor "Respect for patient autonomy" was significant when related to work shift and weekly hours worked (p=0.001 in both relationships). For the work shift, the distribution of the domain in the afternoon category was different, being smaller when compared to the other shifts. In the Dunn test, for the analysis of the three variables, a significant difference was observed between the afternoon (b) and morning (a) shifts, as well as between the afternoon (b) and night (a) shifts. However, there was no significant difference between the morning (a) and night (a) shifts. Regarding the weekly working hours, the distribution of those who work 30 hours was different, being larger compared to the 36 and 40-hour categories.

The distribution of the "Modified autonomy" factor was significant when related to the number of employment contracts, work shifts and weekly hours worked (p=0.045, p=0.034, and p=0.044 respectively). The analysis of the variable "number of contracts" revealed that the distribution of the domain is greater in the category "1 employment contract" compared to the category "2 employment contracts". As for the "work shift", the distribution of the domain was greater in the morning shift compared to the night shift, while the afternoon shift did not present significant differences to the others. Finally, in the variable "weekly working hours", the distribution was greater for those working 30 hours per week compared to 36 and 40 hours.

Table 5 presents the associations between the independent variables and the factors "confidence in medical and nursing knowledge", "meaning of the moral structure" and "teamwork".

Table 5 - Comparison between the distributions of the factors "Trust in medical and nursing knowledge", "Meaning of moral structure" and "Teamwork" among the categories of the variables studied. Florianópolis, SC, Brazil, 2023 (n=165)

	Confidence in medical and nursing knowledge	**Meaning of moral structure**	**Teamwork**

Sex [1]			
Female (n=97)			
mean (SD)	3.48 (1.11)	3.51 (0.65)	3.57 (0.73)
Median [P25; P75]	3.67 [2.67; 4.33]	3.33 [3.00; 4.00]	3.50 [3.00; 4.00]
min-max	1.33; 5.00	2.33; 5.00	2.00; 5.00
Male (n=18)			
mean (SD)	3.80 (0.96)	3.22 (0.71)	3.64 (0.82)
Median [P25; P75]	3.67 [3.33; 5.00]	3.67 [2.33; 3.67]	3.25 [3.00; 4.00]
min-max	2.33; 5.00	2.33; 4.33	3.00; 5.00
p-value	0.513	0.169	0.893
Education[2]			
PhD (n=11)			
mean (SD)	3.79 (0.90)	3.36 (0.57)	3.36 (0.84)
Median [P25; P75]	3.67 [3.33; 4.33]	3.33 [3.00; 3.67]	3.00 [3.00; 3.50]
min-max	2.33; 5.00	2.67; 4.33	2.50; 5.00
Master's Degree (n=42)			
mean (SD)	3.64 (1.11)	3.47 (0.71)	3.58 (0.78)
Median [P25; P75]	4.00 [2.67; 4.33]	3.33 [3.00; 4.33]	3.50 [3.00; 4.00]
min-max	1.33; 5.00	2.33; 4.67	2.00; 5.00
Specialization (n=62)			
mean (SD)	3.41 (1.10)	3.48 (0.65)	3.62 (0.69)
Median [P25; P75]	3.67 [2.67; 4.00]	3.33 [3.00; 4.00]	3.50 [3.00; 4.00]
min-max	1.33; 5.00	2.33; 5.00	2.00; 5.00
p-value	0.396	0.870	0.263
Number of employment contracts[1]			
1 link (n=104)			
mean (SD)	3.48 (1.13)	3.51 (0.65)	3.55 (0.74)
Median [P25;	3.67 [2.67; 4.33]	3.33 [3.00; 4.00]	3.50 [3.00; 4.00]

P75]			
min-max	1.33; 5.00	2.33; 5.00	2.00; 5.00
2 links (n=11)			
mean (SD)	4.00 (0.30)	3.06 (0.65)	3.91 (0.66)
Median [P25; P75]	4.00 [3.67; 4.00]	3.00 [2.33; 3.67]	4.00 [3.50; 4.00]
min-max	3.67; 4.67	2.33; 4.00	3.00; 5.00
p-value	0.213	**0.042**	0.105
Work shift[2]			
Morning (n=48)			
mean (SD)	3.34 (1.28)	3.47 (0.65)	3.35 (0.68)
Median [P25; P75]	3.67 [2.33; 4.33]	3.33 [3.00; 4.33]	3.00a [3.00; 4.00]
min-max	1.33; 5.00	2.33; 4.33	2.00; 5.00
Night (n=24)			
mean (SD)	3.85 (0.87)	3.63 (0.72)	3.85 (0.71)
Median [P25; P75]	4.00 [3.17; 4.50]	3.67 [3.00; 4.17]	3.50b [3.50; 4.25]
min-max	1.67; 5.00	2.33; 4.67	3.00; 5.00
Afternoon (n=43)			
mean (SD)	3.57 (0.92)	3.37 (0.64)	3.69 (0.76)
Median [P25; P75]	3.67 [3.33; 4.00]	3.33 [3.00; 4.00]	3.50b [3.00; 4.00]
min-max	1.33; 4.67	2.33; 5.00	2.00; 5.00
p-value	0.147	0.305	**0.008**
Weekly hours worked[2]			
30 hours (n=38)			
mean (SD)	3.25 (1.19)	3.58 (0.75)	3.47 (0.83)
Median [P25; P75]	3.67 [2.33; 4.00]	3.33a [3.00; 4.33]	3.25 [3.00; 4.00]
min-max	1.33; 5.00	2.33; 5.00	2.00; 5.00
36 hours (n=65)			
mean (SD)	3.65 (1.05)	3.46 (0.59)	3.70 (0.69)

Median [P25; P75]	4.00 [3.33; 4.33]	3.33a [3.00; 4.00]	3.50 [3.00; 4.00]
min-max	1.33; 5.00	2.33; 4.33	2.00; 5.00
40 hours (n=6)			
mean (SD)	3.89 (0.27)	2.67 (0.21)	3.08 (0.20)
Median[P25; P75]	3.83 [3.67; 4.00]	2.67b [2.67; 2.67]	3.00 [3.00; 3.00]
min-max	3.67; 4.33	2.33; 3.00	3.00; 3.50
Overtime / APH (n=6)			
mean (SD)	3.72 (1.12)	3.56 (0.66)	3.50 (0.77)
Median [P25; P75]	3.67 [2.67; 5.00]	3.67 [3.67; 3.67]	3.25 [3.00; 3.50]
min-max	2.33; 5.00	2.33; 4.33	3.00; 5.00
p-value	0.384	**0.014**	0.052

Sources: Survey data, 2023
Legend: 1. Mann-Whitney test; 2. Kruskal-Wallis test. When significant, Dunn's pairwise (post-hoc) test was used.

It can be seen in Table 5 that the distribution of the factor "Meaning of the moral structure" was significant when related to the number of employment contracts and weekly hours worked (p=0.042 and p=0.014 respectively). Regarding the distribution of the factor "Teamwork", there was significance when related to work shift (p=0.008).

DISCUSSION

A total of 115 nurses participated in the study, the majority of whom were female. This result was similar to a study on nurses' moral sensitivity and patient satisfaction conducted with nurses in Tabriz, Iran, which had a sample size of 96.5% female participants. [13]

The level of training of the participating nurses was analyzed through the sociodemographic questionnaire and it was observed that the majority had a specialization, followed by those who had a master's degree and, to a lesser extent, a doctorate, data that are in line with recent publications on moral sensitivity in nurses, in which the majority of them have postgraduate degrees, both at a *lato* and *stricto sensu* level[13-15].

The sociodemographic characterization variables analyzed in this study were the number of employment contracts of the participants, work shifts and overtime, all of which focused on work aspects, which differs from what is commonly found in the international

literature, which focuses on the age of the participants, their marital status and length of experience in nursing, mainly due to the relationship between length of service and increased moral sensitivity[13, 16-17]. However, as this is one of the pioneering studies to use the MSQ-VB adapted for Brazilian nurses, other aspects were considered, as it is known that sociocultural differences influence the moral sensitivity of nurses around the world, and therefore, their particularities must be taken into account[9].

The average moral sensitivity in this study was considered moderate among the participants. This data is similar to that found in other studies, such as one developed in China [11], which revealed a moderate average moral sensitivity among intensive care nurses, as well as the study that investigated 171 nurses who cared for terminally ill patients in South Korea and found a moderate average moral sensitivity[12]. In contrast, results from a study carried out in five hospitals in Iran with nurses who cared for patients with COVID-19[15] and findings from another study with nurses who worked in psychiatric wards in Japan and Finland both revealed high averages of moral sensitivity [18]. The possible causes of this difference may be linked to cultural and organizational diversities, the type of service offered, and the types of diseases that affect the population. All of this can affect the moral sensitivity of nurses[18].

The lowest averages of moral sensitivity found in the present study among nurses were related to the factors "modified autonomy" and "meaning of the moral structure".

The "modified autonomy" factor refers to nurses' decision-making when it limits the patient's autonomy, to protect the patient or others[5,15]. Low levels of moral sensitivity in this factor demonstrate that most participants disagreed either partially or completely with the following questions: "I base my decisions on professional knowledge regarding what is best for the patient, even if he or she protests" and "When a decision needs to be made that goes against the patient's wishes, I express myself according to what I believe is best for him or her". Decision-making that interferes with the patient's autonomy can be guided by high moral sensitivity that encourages action by recognizing the need, as in an ethically weighted risk-benefit relationship. However, the low level of moral sensitivity can be analyzed in reverse. In other words, the interpretation of the findings indicates that by disagreeing on these questions, nurses signal that preserving autonomy is an unequivocal condition in any situation.

Furthermore, the low levels of moral sensitivity in the "meaning of the moral framework" factor are related to low sensitivity regarding the patient's loss of trust in the professional's work, especially during inappropriate decision-making or when the patient's autonomy is not respected[9]. This data is in line with those obtained in the literature, where the levels of moral sensitivity found in the "meaning of the moral framework" factor were high, as

were those obtained in other studies[13,17]. The low levels of moral sensitivity in this factor may suggest that the ethical and moral framework that guides nurses in the analysis and resolution of ethical problems and the ability to identify the values, principles and norms involved in clinical decisions needs to be expanded.

The highest averages of moral sensitivity in the present study were found in the factor "respect for patient autonomy". This demonstrates that most of the study participants agreed (partially or totally) with the questions "I believe that good nursing care always includes the patient's personal choices", "I believe that good nursing care includes patient participation", "I find it difficult to provide good nursing care against the patient's will", and "When I have to make difficult decisions regarding my patient, I must be honest with him/her".

A study shows that the factor "respect for patient autonomy" is related to building a relationship of trust with the patient, ensuring that their needs are met while respecting their autonomy[9]. Therefore, high levels of moral sensitivity in this factor are of great importance for the development of more humanized nursing care based on ethical principles, where the nurse acts as an advocate in favor of the patient.

Other factors showed high levels of moral sensitivity, such as "experiencing moral conflict". According to some studies, this factor shows that most participants are exposed to ethical problems daily[9,19]. This means that most study participants agreed (partially or completely) with the following questions: "I often face situations in which it is difficult to know which action is ethically correct for the patient", "I often face conflicting situations regarding how to approach a patient", and "I often face situations in which it is difficult to allow the patient to make his or her own choices".

Similarly, high levels of moral sensitivity were observed in the current study for the "teamwork" factor. This shows that most participants agreed (partially or completely) with the question: "In situations where it is difficult to know what is ethically appropriate, I consult my colleagues about what should be done", in contrast to the question "I rely on the knowledge of other colleagues when I am not sure what to do".

The "teamwork" factor is extremely important to achieve excellent care, as it expresses the need for knowledge exchanges between the multidisciplinary team to improve care, both through the division of responsibility and by assisting in decision-making to resolve ethical conflicts[9].

This data converges with that found in a study[20] that demonstrated the need for interpersonal relationships and teamwork to develop moral sensitivity, focusing on building a trusting and patient-centered relationship. Therefore, it was observed that the relationship

between team members allowed each one to express their point of view on a given situation, provoking new perceptions that contribute to the development of moral sensitivity and assistance in moral deliberations. Therefore, reciprocity between professionals ensures that the team's decisions and actions are valued, enabling care based on shared ethical deliberations among those involved, who seek solutions to the ethical problems identified in practice.

The factor "confidence in medical and nursing knowledge" also showed high levels of moral sensitivity. This finding is consistent with the results of another study that also found high levels of moral sensitivity in this factor among intensive care nurses [21].

This factor refers to the belief that multidisciplinary knowledge is necessary when facing ethical conflicts. This means that participants agreed (partially or totally) with the questions: "I trust my own emotions when I have to make a difficult decision for the patient" and "My practical experience is more useful than theoretical knowledge in situations where one has to choose what is ethically correct", in contrast to the question "There are situations in which there are good reasons to intimidate a patient with an injection if oral medication is refused", for which the majority of responses were "partially disagree" or "totally disagree". This demonstrates that the study participants are against approaches that intimidate the patient and disrespect their autonomy [9].

The MSQ-VB contributes to the understanding of the factors involved in ethical decision-making. In a multidisciplinary team, there are several possible approaches, and this questionnaire seeks to contemplate the possible opinions generated during deliberation regarding the ethical problem.

Regarding the tests of dependent and independent variables, there was significance for "Teamwork" when related to the work shift, where it was observed that the afternoon shift presented a lower moral sensitivity. The factor "Respect for patient autonomy" had a significant association with the work shift and weekly hours worked, with moral sensitivity being lower in the group that worked in the afternoon shift compared to the other shifts. Those who work 30 hours presented greater moral sensitivity compared to the 36 and 40 hour categories.

Regarding "Modified Autonomy", significance was observed when related to the number of employment contracts, work shift and weekly hours worked.

In the variable "employment contract", nurses with two jobs have lower moral sensitivity in the factors "modified autonomy" and "meaning of the moral structure" compared to those who only have one job.

It was also found that in the variable "work shift", night shift had lower moral sensitivity in the factors "respect for patient autonomy" and "modified autonomy" compared to nurses

who work in the morning and afternoon shifts. The same finding was observed among nurses who work overtime. It was noted that nurses had reduced moral sensitivity in the factors "respect for patient autonomy" and "modified autonomy" compared to other nurses who work 30 and 36 hours.

The distribution of the factor "Meaning of the moral structure" was significant when related to the number of employment contracts and weekly hours worked. Regarding the number of work contracts, it was found that the distribution of the factor among the category of one employment contract was greater compared to the distribution of those with two contracts, demonstrating a lower moral sensitivity among nurses who have two employment contracts. Regarding the weekly working hours, the distribution of those who work 40 hours was smaller when compared to the categories of 30 and 36 hours. In other words, the greater number of jobs/contracts and the greater workload may compromise the ability of nurses to empathetically perceive patients' needs, reducing their moral sensitivity and, consequently, the quality of care.

Therefore, the number of employment contracts, the work shift and the weekly hours worked were variables that directly interfered with the moral sensitivity of participants, where nurses who worked 30 hours per week, who had only one employment contract, and who worked during the day had higher levels of moral sensitivity.

A study carried out in 2020 [22] identified the relationship between work overload and excessive bureaucratic demands on morally sensitive nursing professionals. The findings of the study demonstrated that work overload results in work done mechanically, in an automatic way, thus impairing patient care[22]. Another study also highlighted that overload is related to the decrease in moral sensitivity and illness among professionals. These factors directly interfere in the nurse-patient relationship, promoting the mechanization of work[21].

Despite the limitation of this study, namely the application of the MSQ-VB in only one public hospital, it contributes by highlighting moral sensitivity as a necessary condition for identifying ethical problems in healthcare practice and for decision-making processes. Studies on moral sensitivity are anchored in promoting spaces for the development of ethically competent relationships and nursing practices with quality and safety for patients.

CONCLUSION

The results demonstrate that the nurses participating in the study had moderate levels of moral sensitivity. There was statistical significance in the factors “modified autonomy”, “meaning of the moral structure”, “respect for autonomy” and “teamwork”, when related to the number of employment contracts, weekly hours worked, and work shifts, demonstrating that these variables influence the moral sensitivity of nurses.

Specifically regarding the “respect for patient autonomy” factor, nurses who worked 30 hours per week showed greater moral sensitivity, while those who worked the afternoon shift showed less moral sensitivity. In the “modified autonomy” factor, nurses who had one employment contract, who worked the morning shift, or who worked 30 hours per week demonstrated greater moral sensitivity. Regarding the factor “meaning of the moral structure”, nurses with one employment contract showed greater moral sensitivity and those who worked 40 hours per week showed less moral sensitivity. As for the “teamwork” factor, nurses who worked the morning shift showed less moral sensitivity.

The findings of this study reinforce that work conditions and organization are important aspects to be considered when assessing nurses' ability to recognize and intervene in ethical problems.

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Availability of data and material

Access to the dataset may be granted upon request to the corresponding author.

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