Cogitare Enfermagem

ORIGINAL ARTICLE

SUICIDE RISK IN NURSING AND ITS RELATIONSHIP WITH SAFE CARE ATTITUDES*

HIGHLIGHTS

1. Psychosocial variables impact attitudes in the workplace.
2. Family problems, stress, and a history of illness influence work attitudes.
3. Collaboration and support are essential for professional well-being.

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ABSTRACT

Objective: to analyze the association between the variables of risk factors for suicide and attitudes related to patient safety among Primary Health Care Nursing professionals, and attitudes related to patient safety among Nursing professionals. **Method:** a cross-sectional study with a quantitative approach, with 251 nursing professionals working in Uberlândia-Brazil, carried out between July and September 2020, using the instruments: Mini International Neuropsychiatric Interview Plus and Safety Attitudes Questionnaire-Short Form. Analysis using inferential statistical methods and multiple regression. **Results:** negative attitudes increased by 2% among participants with health conditions or a history of suicide; around 3% among those with chronic pain or illness who were at risk of thinking of a way to commit suicide; around 7% for participants with suicidal behaviors. **Conclusion:** mental health, family history, and working conditions are interlinked with work attitudes.

DESCRIPTORS: Nursing; Mental Health; Patient Safety; Suicide; Occupational Health.

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INTRODUCTION

Nursing professionals play a crucial role in Primary Health Care (PHC), acting as the first line of contact between patients and health services. However, PHC is a dynamic and challenging field, where nursing professionals are exposed to multiple demands, such as screening, prevention, and health promotion. These demands can contribute to high levels of stress, and burnout, and impact the quality of care provided[1-2].

Many nursing professionals have reported emotional exhaustion and work overload2, which can negatively impact their mental health, and often3 face high levels of stress and fatigue due to the profession's demands, especially in the context of the COVID-19 pandemic. Chronic stress can lead to emotional exhaustion, contributing to mental health problems, which have suicide as one of the worst prognoses if left untreated[2-3].

The increased risk of suicide among nursing professionals is worrying and is often related to stigma when seeking help and limited access to support services. This demand is present in a variety of settings, including PHC services[4], a circumstance which further increases the vulnerability of these professionals to the severity of mental disorders[5].

The mental health of nursing professionals is intrinsically linked to patient safety[3-5]. Nursing professionals who face mental health problems may show lapses in attention, impaired decision-making, and less adherence to safety protocols, putting patients at risk of adverse incidents[6-7].

However, the literature shows a scarcity of studies that directly address the association between suicide risks among nursing professionals and safe care; especially with regard to Brazilian PHC workers, such data is practically non-existent.

Since patient safety is a central aspect of healthcare provision, it is crucial to assess how nursing professionals' mental health can influence their perceptions and behaviors concerning patient safety. By identifying the possible correlations between these factors, interventions can be targeted to promote the mental health of professionals and, consequently, improve the safety and quality of care provided to the population.

The aim of this study was to analyze the association between the variables of risk factors for suicide and attitudes related to patient safety among PHC nursing professionals, and attitudes related to patient safety among nursing professionals.

METHOD

This is a cross-sectional, descriptive-analytical study with a quantitative approach. The population was made up of nursing professionals (assistants, nursing technicians, and nurses) working in PHC in the municipality of Uberlândia (MG). During the data collection period, the number of nursing professionals was 450 (172 nurses and 278 nursing technicians and assistants).

The inclusion criteria were professionals who had been working in PHC in the municipality of Uberlândia (MG) for more than three months (length of professional experience). Professionals who were away from their jobs at the time of data collection were excluded. Convenience selection was used, in which all nursing professionals working in PHC were invited to take part in the study.

After publicizing the work and distributing the instruments to be filled in by the professionals, 251 questionnaires were answered, corresponding to the study population, and the others did not return the completed questionnaires. Data collection took place

between July and September 2020, using a data collection instrument divided into four blocks:

a) a script with sociodemographic and professional information drawn up by the researchers themselves;

b) a script on health conditions and family history of risk factors for suicidal behavior, based on material produced by the World Health Organization8. A checklist was drawn up by the researchers, in which the participant marked "yes" or "no" as to the presence of each factor. A pilot test was carried out with five participants.

c) the Mini International Neuropsychiatric Interview Plus (MINI Plus)[9], which is a structured interview instrument used to assess a variety of psychiatric disorders, translated and validated in Brazil. The questions are designed to be yes or no, with a section dedicated to assessing suicide risk. The questions identify risk factors, suicidal thoughts, suicide plans, access to lethal means and other risk indicators. If the positive answers add up to a score between one and five points, the risk is considered low, between six and nine points, moderate risk and greater than or equal to ten, high risk.

d) Safety Attitudes Questionnaire-Short Form 2006 for Brazil - Short Form 2006 (SAQ)10, validated in Brazil with authorized use by the author, composed of several sub-scales: Teamwork atmosphere, Safety atmosphere, Job satisfaction, Perception of stress, Perception of management and Working conditions. Participants respond to a series of statements using agreement scales with scores. The higher the scores, the more positive the attitudes are considered to be; cases over 75 points are considered satisfactory.

An envelope containing the data collection instruments was handed out for self-completion and, on an agreed date, the envelopes were collected. The descriptive and inferential analyses were carried out using the Statistical Package for the Social Science (SPSS) software, version 26. The quantitative data was managed with the information entered, tabulated, and consolidated in the Microsoft Excel software by double entry and independent typists, with the aim of minimizing database entry failures. The discussion of the results obtained was carried out considering a 95% confidence level ($p<0.05$). Initially, the Kolmogorov-Smirnov (K-S) normality test was applied to assess the distribution of the variables and the use of parametric or non-parametric tests.

The statistical tests for the inferential analyses of association and correlation were Student's t-test, chi-squared test ($X2$), Analysis of Variance (ANOVA) with Tukey's post-hoc, and Pearson's and Spearman's correlation tests.

In the end, Multiple Linear Regression was used, initially performing crude analysis models (with all the variables), and then analyzing the adjusted associations with $p<0.05$. The research was approved by the Research Ethics Committee of the Federal University of Uberlândia (CEP/UFU), under opinion no. 3.849.113, in 2019.

RESULTS

Most of the professionals who took part in the survey were married (60.7%), considered themselves religious (91.3%), were women (91.9%), and were nursing technicians (58.9%). As for age, the average was 38.1 years, the average weekly working day was 61.49 hours and the length of time working in nursing was 10 years.

According to Table 1, the most positive attitudes related to teamwork (p=0.04) and safety atmosphore (p=0.04) are associated with the category of nurses. The perception of stress has better associations with non-religious (0.03) and nurses (p=0.03). Better perception of management is associated with females (p=0.01), non-religious (p=0.01),

and nurses (p=0.00). Positive attitudes towards working conditions were also associated with nurses (p=0.04).

Table 1 - Distribution of nursing professionals according to SAQ domains and categorical sociodemographic data. Uberlândia (MG), Brazil, 2023.

SAQ general domains							Sex				Religiosity				Professional category	
	Min	Max	Med	Sd	t	p-value	Fem	Male	t	p-value	No	Yes	t	p-value	Nur	Nur Tech
Teamwork atmosphere	17.86	100	72.48	16.02	1.29	0.21	77.82	72.60	-0.32	0.75	76.23	77.67	2.05	0.04	79.96	75.72
Safety atmosphere	37.50	100	77.29	16.09	0.27	0.78	72.31	73.21	0.80	0.43	74.81	72.31	1.98	0.04	75.21	71.23
Job satisfaction	0.00	100	73.33	23.59	0.20	0.83	85.72	84.91	-0.73	0.46	82.96	86.20	1.72	0.08	87.93	84.52
Perception of stress	0.00	100	68.47	19.96	-1.83	0.08	67.84	76.64	2.20	0.03	77.31	67.40	2.10	0.03	72.50	65.61
Perception of management	0.00	100	68.64	25.19	-2.55	0.00	67.90	77.85	2.66	0.01	79.40	68.47	3.44	0.00	73.86	65.50
Working conditions	31.25	100	85.61	15.33	-0.27	0.78	73.23	74.78	0.06	0.92	74.22	73.79	2.06	0.04	77.17	70.99

Source: The authors (2023).

Table 2 shows that safety atmosphere is negatively correlated with age (p=0.00), so younger people tend to perceive a better safety atmosphere. Participants with longer working hours perceived a worse safety atmosphere (p=-0.04). Perception of stress has a positive correlation with age (p=0.01). Perception of management has a negative correlation with age (p=0.01), which indicates that younger people tend to have a better perception of management.

Table 2 - Distribution of nursing professionals according to SAQ domains and continuous sociodemographic data. Uberlândia (MG), Brazil, 2023.

SAQ general domains	Age		Weekly working hours		Length of service	
	Correlação	p-value	Correlation	p-value	Correlation	p-value
Teamwork atmosphere	-0.18	0.24	0.14	0.58	-0.23	0.18
Safety atmosphere	-0.50	0.00	0.26	0.00	-0.16	0.35
Job satisfaction	0.06	0.72	-0.04	0.88	-0.14	0.43
Perception of stress	0.39	0.01	-0.21	0.42	0.50	0.00
Perception of management	-0.39	0.01	-0.09	0.74	-0.29	0.10
Working conditions	0.04	0.76	-0.12	0.63	-0.00	0.99

Source: The authors (2023).

With regard to health conditions and family history, Table 3 shows that the majority of participants had experienced a stressful situation (67.8%), had lost a family member or suffered a major family breakdown in the last year (31.9%), and had parents or siblings with a mental disorder (10.8%) or who had already attempted suicide (8.4%).

More negative attitudes towards the teamwork atmosphere may be related to having a neoplastic disease (p=0.0). Lower scores in the job satisfaction domain were associated with the presence of disabling illnesses (p=0.056) and with having a neoplastic disease (p=0.01). As for the perception of stress at work, more negative attitudes were associated with the presence of disabling illnesses (p=0.01) and experiencing stressful situations in the last year (p=0.02) (Table 3).

Table 3 - Distribution of Nursing professionals according to health conditions, family history and SAQ domains. Uberlândia (MG), Brazil, 2023.

Domains of the SAQ	General					Suffering from a disabling illness				Suffering from a neoplastic disease				Experiencing stressful situations in the last year			
	N	Min	Max	Median	Standard Deviation	t	p	YES	NO	t	p	YES	NO	t	p	YES	NO
Teamwork atmosphere	241	17.86	100	72.48	16.02	0.35	0.73	74.86	77.55	-17,10	0,00	95,56	77,01	-0,35	0,72	77,62	76,77
Safety atmosphere	243	37.50	100	77.29	16.09	0.02	0.98	72.62	72.82	-2,17	0,15	86,90	72,31	-0,55	0,57	72,98	71,73
Job satisfaction	230	0.00	100	73.33	23.59	-2.29	0.05	91.67	85.54	-4,99	0,012	96,25	85,46	0,00	0,99	85,58	85,60
Perception of stress	238	0.00	100	68.47	19.96	-3.68	0.01	86.25	68.22	1,32	0,41	43,75	68,61	-2,32	0,02	71,19	63,20
Perception of management	237	0.00	100	68.64	25.19	-0.12	0.90	69.72	68.62	-1,85	0,20	88,89	68,09	-0,78	0,43	68,93	66,73
Working conditions	238	31.25	100	85.61	15.33	-0.38	0.71	77.78	73.46	-2,18	0,15	91,67	73,17	-0,57	0,56	73,88	71,82

Source: The authors (2023).

Table 4 shows that 22 participants (9.1%) thought it would be better to be dead, 13 (5.3%) had ever wanted to harm themselves, 15 (6.1%) had ever thought about suicide, as well as having thought of a way to kill themselves (15; 6.1%), four (1.6%) had ever attempted suicide, 13 (5.3%) had ever attempted suicide.

As for the associations, it can be seen that the participants who marked "no" to the statement "thought it would be better to be dead or wished they were dead" tended to have a greater positive relationship with the domains "job satisfaction" (p=0.00), "perception of management" (p=0.01) and "working conditions" (p=0.04) (Table 4).

Negative responses to the item "thought about suicide" tended to have a higher level of agreement in relation to the "working conditions" domain (p=0.04), and participants who said they had not attempted suicide tended to have a higher level of agreement in relation to the "job satisfaction" domain (p=0.037). A negative correlation (p=0.03) was found between the item "wanted to harm self" and the domain "perceived stress". This same result appeared between the item "thought of a way to commit suicide" and the domain "working conditions" (p=0.04) (Table 4).

Table 4 - Distribution of Nursing professionals according to suicide risk and SAQ domains. Uberlândia (MG), Brazil, 2023.

	Thought it would be better to be dead or wished was dead				Wanted to harm self				Thought about suicide				Thought of a way to commit suicide				Has attempted suicide			
	t	p	sim	não	t	p	sim	não	t	p	sim	não	t	p	sim	não	t	p	sim	não
Teamwork atmosphere	0.36	0.71	75.75	77.54	-1.10	0.28	82.29	77.16	-0.65	0.52	80.32	77.25	-0.12	0.90	78.08	77.37	-0.39	0.70	79.17	77.38
Safety atmosphere	-0.97	0.34	75.89	72.62	-0.20	0.84	73.81	72.85	-0.35	0.73	74.45	72.81	-0.36	0.72	74.45	72.75	0.40	0.69	71.73	72.95
Job satisfaction	2.95	0.00	74.25	87.01	0.32	0.75	84.58	85.97	1.21	0.24	80.38	86.23	1.55	0.14	78.08	86.40	2.31	0.03	78.33	86.54
Perception of stress	0.00	0.99	68.31	68.34	-2.38	0.03	80.68	67.75	-0.25	0.80	70.31	68.26	-0.24	0.80	70.31	68.31	0.22	0.82	67.36	68.73
Perception of management	2.53	0.01	57.06	69.73	0.26	0.79	67.12	68.80	1.29	0.21	59.44	69.22	1.44	0.17	58.40	69.25	-0.69	0.50	71.94	68.48
Working conditions	2.15	0.04	60.54	74.82	-1.10	0.28	82.29	77.16	2.24	0.04	55.30	74.57	2.31	0.04	54.55	74.57	0.63	0.53	67.50	73.95

Source: The authors (2023).

The data in Table 5 shows that the chance of negative attitudes towards teamwork increases by around 2% for those with health conditions or a history of health problems, especially the variable of having parents or siblings with a mental disorder (p-value = 0.02). With regard to safety atmosphere attitudes, the chance of negative attitudes increases by 5% for certain sociodemographic characteristics, especially among younger participants (p-value = 0.00), and by around 1% for those with chronic pain (p-value = 0.01).

With regard to job satisfaction (Table 5), the chance of negative attitudes increases by around 2% for those with chronic pain or illness (p-value = 0.02), and by around 7% for participants who have thought about suicide or some way of committing suicide (p-value = 0.00).

In the perception of managers, the chance of negative attitudes increases by around 7% in certain sociodemographic categories (religious, nursing technicians and shorter time in the profession (p-value = 0.00), and in the context of suicidal ideation behaviors, there is an increase of around 4% for those who have the desire to be dead (p-value = 0.00). With regard to working conditions, the chance of negative attitudes increased by around 3% for those at risk of suicidal thoughts (Table 5).

Table 5 - Distribution of nursing professionals according to the blocks of variable items and domains of the SAQ. Uberlândia (MG), Brazil, 2023.

Domains	Sociodemographic		Health condition and history		Suicidal ideation behaviors	
	p-value	Adjusted R²	p-value	Adjusted R²	p-value	Adjusted R²
Teamwork	0.07	0.02	0.02	0.02	-	-
Safety atmosphere	0.00	0.05	0.01	0.04	-	-
Job satisfaction	0.14	0.00	0.02	0.03	0.00	0.07
Perception of stress	0.01	0.04	-	-	0.10	0.00

Perception of management	0.01	0.04	0.09	0.01	0.00	0.04
Working conditions	0.09	0.00	0.08	0.02	0.00	0.03

Source: The authors (2023).

DISCUSSION

The study population was made up mostly of married, religious, female, and technical nursing professionals. The predominance of married professionals, women, and nursing technicians is congruent with the known demographics of the profession and reflects global trends[11-13].

The fact that nurses have more positive attitudes towards teamwork and the safety atmosphere corroborates the existing literature. One study[14] showed that healthcare teams that promote a collaborative and safe working environment tend to improve the quality of care provided to patients. This suggests that nursing teams should be more aware of the importance of teamwork and patient safety, which is reflected in their positive attitudes in these domains.

The associations between the perception of management and characteristics such as female gender, non-religiousness, and the professional category of nurses highlighted the influence of individual and professional factors on perceptions of management. This is in line with the findings of a survey[15] which indicated that perceptions of leadership can vary based on the individual characteristics and professional experience of employees. This finding may reflect the crucial role of nurses in promoting interdisciplinary collaboration and maintaining a safe environment for patients[16].

The results of this research are in line with studies that have explored the differences in perception between genders and indicated that sociodemographic and individual factors can influence the way nursing professionals evaluate leadership[16-17]. In addition, the results indicate that the perception of stress is associated with characteristics such as religiosity and professional category.

The negative correlation between age and perception of the safety atmosphere reinforces the results of some studies[17-18] which have shown that younger professionals may be more sensitive to working conditions and safety, while more experienced professionals may have developed stress coping strategies, preferring to deny, consciously or unconsciously, involvement with the demands related to this issue.

This finding is also congruent with studies that have indicated that experience and adaptation to the work environment can shape nursing professionals' perceptions of these aspects, and that investment in creating positive attitudes towards safe care should begin as early as possible, preferably during professional training; this is because it seems clear that there are changes in professionals' perceptions and attitudes over time[16-18]. This highlights the importance of considering age and professional experience when analyzing workers' perceptions[17-18].

The positive correlation between perceived stress, age, and length of time working in nursing can be backed up by studies[17-19], which identified that professionals with more experience often face more intense demands at work, leading to higher levels of stress.

The findings in relation to health conditions and family history are in line with a study[20] which highlighted the influence of stressful events and a history of mental disorders on the perception of stress and mental health among health professionals; enabling a high prevalence of suicidal ideation among health professionals, including nursing workers.

The association between the presence of disabling illnesses and negative attitudes toward job satisfaction is supported by recent studies that have shown the influence of health conditions on the satisfaction and performance of professionals[17-21], such as an investigation that identified a relationship between the presence of chronic health conditions and reduced levels of job satisfaction among health professionals[17-21]. These findings indicate the need for strategies to support professionals' physical health as part of initiatives to improve the working environment.

Analysis of the Mini Plus data offers additional insights into the relationship between mental health and perceptions of the work environment. The result is supported by research,[22-23] i.e. studies that have identified an association between suicidal ideation and job dissatisfaction. The association between suicidal ideation and negative perceptions at work suggests a complex relationship between mental well-being and the professional environment, highlighting the need for appropriate support and interventions, including studies that highlight the importance of job satisfaction and management perceptions for the mental well-being of healthcare professionals[23].

A study[24] which evaluated the association between attitudes towards work and the psychological well-being of nursing professionals highlighted a correlation between negative attitudes towards work and lower levels of psychological well-being, corroborating this study's findings.

The analysis of health conditions and family history shows the relevance of these factors in assessing the well-being of nursing professionals. The presence of disabling illnesses and exposure to stressful situations are associated with negative attitudes toward work. Similar results were found in studies investigating the impact of physical and emotional health on productivity and work engagement[25-26].

Some recent studies corroborate these results, highlighting that the mental health of health professionals is directly related to the quality of collaboration and the effectiveness of the team[26-27]. In addition, the association between chronic pain and negative attitudes suggests that physical discomfort can affect the perception of safety conditions at work[27].

Evidence suggests that the presence of chronic illnesses has an impact not only on physical well-being but also on job satisfaction and the quality of care provided[28], a fact that is extremely relevant in the context of nursing. Thus, recent studies have shown that health professionals who face emotional disorders are more likely to be dissatisfied at work and have lower organizational commitment[25-29].

The analysis of attitudes towards management highlights the influence of sociodemographic characteristics and suicidal ideation behaviors. These results are in line with the literature that explores the factors that affect professionals' perceptions of leadership and management[21,29].

The study's limitations include the fact that data collection took place during the pandemic and the fact that the data collection instrument was self-administered, which may have led to biases in the interpretation of the questions.

CONCLUSION

The association between attitudes to safe care and socio-professional variables highlights the need to strengthen interdisciplinary collaboration. The connection between health, family history, and attitudes reveals the importance of mental health care in nursing. The presence of disabling illnesses and mental disorders in the family correlated with less favorable attitudes. In addition, the correlation between perceived stress, recent experiences, and negative attitudes underlines the need to address occupational stress, including PHC.

As for the advances in the area of Nursing knowledge in the study, it is pointed out that especially in PHC, the implementation of emotional support programs and self-care strategies becomes vital, and this approach can reflect positively on the health of the population served, creating a virtuous cycle of care and health promotion.

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Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - **Bertussi VC, Ferreira LA, Pereira LS, Santana LC, Junqueira MA de B.** Drafting the work or revising it critically for important intellectual content - **Bertussi VC, Ferreira LA, Pereira LS, Santana LC, Junqueira MA de B.** Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - **Bertussi VC, Ferreira LA, Santana LC, Junqueira MA de B.** All authors approved the final version of the text.