Common mental disorders in emergency services nursing professionals

Transtornos mentais comuns em profissionais de enfermagem de serviços de emergência

Trastornos mentales comunes en profesionales de enfermería de servicios de emergencia

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Abstract

Objective: To analyze sociodemographic and work variables regarding the risk for common mental disorders in nursing professionals working in urgent and emergency care services.

Methods: Observational, cross-sectional, quantitative study conducted in the Adult Emergency Room and Adult and Coronary Intensive Care Units of a public teaching hospital and in two public Emergency Care Units in the countryside of Minas Gerais, Brazil. Data collection was performed with use of two instruments: sociodemographic and professional questionnaire and the Self-Reporting Questionnaire. Descriptive statistics, Pearson's Chi-square, Fisher's exact and binomial logistic regression were performed in the analyzes.

Results: Participation of 302 nursing professionals. There was a prevalence of 20.5% for common mental disorders. In the bivariate analysis, the variables related to common mental disorders were: not having children (p=0.025), working in tertiary care departments (p=0.008), statutory contract regime (p=0.041). In the multivariate analysis, the hospital departments (p=0.001) and the nurse position (p=0.017) indicated a high risk for common mental disorders.

Conclusion: The variables of department and position behaved as risk and had a prevalence odds ratio of 4.21 and 2.80, respectively, indicating that the working conditions in urgent and emergency environments associated with the nurse position favor the development of common mental disorders in nursing professionals. Through this study, it was possible to understand the need to implement strategies for the early identification of common mental disorders and the promotion of mental health among professionals, aiming at improving psychosocial aspects in work environments.

Resumo

Objetivo: Analisar as variáveis sociodemográficas e de trabalho quanto ao risco de transtorno mental comum em profissionais de enfermagem que atuam em serviços de atenção às urgências e emergências.

Métodos: Estudo observacional, transversal com abordagem quantitativa, realizado no Pronto Socorro Adulto e nas Unidades de Terapia Intensiva Adulto e Coronariana de um hospital público de ensino e em duas Unidades de Pronto Atendimento públicos, do interior de Minas Gerais, Brasil. A coleta de dados ocorreu por meio de dois instrumentos: questionário sociodemográfico e profissional e o *Self-Reporting Questionnaire*. Para as análises foi realizada a estatística descritiva, Qui-quadrado de Pearson, exato de Fisher e regressão logística binomial.

Resultados: Participaram 302 profissionais de enfermagem. Observou-se prevalência de 20,5% para transtornos mentais comuns. Na análise bivariada, as variáveis relacionadas aos transtornos mentais comuns foram: não ter filhos (p=0,025), trabalhar nos setores da atenção terciária (p=0,008), regime de contrato

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estatutário (p=0,041). Na análise multivariada, os setores hospitalares (p=0,001) e o cargo de enfermeiro (p=0,017) indicaram risco elevado para transtornos mentais comuns.

Conclusão: As variáveis setor e cargo se comportaram como risco e apresentaram razão de chance de prevalência de 4,21 e 2,80, respectivamente, indicando que as condições de trabalho nos ambientes de urgência e emergência associadas ao cargo de enfermeiro favorecem o desenvolvimento de transtornos mentais comuns nos profissionais de enfermagem. Este estudo possibilitou conhecer a necessidade de implantação de estratégias para identificação precoce de transtornos mentais comuns e a promoção da saúde mental dos profissionais, visando a melhoria dos aspectos psicossociais nos ambientes de trabalho.

Resumen

Objetivo: Analizar las variables sociodemográficas y de trabajo respecto al riesgo de trastornos mentales comunes en profesionales de enfermería que actúan en servicios de atención de urgencias y emergencias.

Métodos: Estudio observacional, transversal, con enfoque cuantitativo, realizado en el Servicio de Urgencias Adulto y en las Unidades de Cuidados Intensivos Adulto y Coronaria de un hospital público universitario y en dos Unidades de Pronta Atención públicas del interior de Minas Gerais, Brasil. La recopilación de datos se realizó mediante dos instrumentos: cuestionario sociodemográfico y profesional y el *Self-Reporting Questionnaire*. Para los análisis, se utilizó la estadística descriptiva, ji cuadrado de Pearson, exacta de Fisher y regresión logística binomial.

Resultados: Participaron 302 profesionales de enfermería. Se observó prevalencia del 20,5 % de trastornos mentales comunes. En el análisis bivariado, las variables relacionadas con los trastornos mentales comunes fueron: no tener hijos (p=0,025), trabajar en sectores de atención terciaria (p=0,008) y el régimen de contrato estatutario (p=0,041) En el análisis multivariado, los sectores hospitalarios (p=0,001) y el cargo de enfermero (p=0,017) indicaron riesgo elevado de trastornos mentales comunes.

Conclusión: Las variables sector y cargo se comportan como riesgo y presentaron razón de momios de prevalencia de 4,21 y 2,80, respectivamente, lo que indica que las condiciones de trabajo en los ambientes de urgencias y emergencias asociadas al cargo de enfermero favorecen el desarrollo de trastornos mentales comunes en los profesionales de enfermería. Este estudio permitió conocer la necesidad de implementar estrategias para la identificación temprana de trastornos mentales comunes y la promoción de la salud mental de los profesionales, con el objetivo de mejorar los aspectos psicosociales en el ambiente de trabajo.

Introduction

In the contemporary world, over the years, the work environment has become more competitive and health care more complex, requiring greater qualification of workers. Several factors interfere in the illness of health professionals, among which the social and individual stand out, as well as working conditions, although the manifestations of suffering do not occur in the same way for everyone. Working conditions represent important factors that determine the health of workers and may trigger intense strain on physical and mental health.[1,2]

Work in the health area represents a scenario where several factors contribute to the illness of professionals, whether as a result of the complexity of care, working conditions, lack of professional recognition, low wages, or the long and exhausting hours required in health care institutions.[3,4]

The care in health units within the urgent and emergency care networks must guarantee the embracement of acute or chronic acute cases of clinical, psychiatric or traumatic nature, and offer optimization of health care, as they deal with the unexpected, the victim's instability, and the need for immediate procedures combined with the accelerated work pace.[5,6]

Direct patient care performed by nursing professionals working in hospitals and emergency care units combined with stressful situations can generate overload and psychological stress and lead to professionals' illness with the presence of physical and psychological symptoms. Stressors in the work environment represent potential determinants of health problems for nursing professionals, with the onset of common mental disorders (CMD).[7-10]

The expression common mental disorder, also called minor psychiatric disorder, is used to designate non-psychotic symptoms, often related to subclinical conditions of stress, anxiety and depression that characterize changes in the normal functioning of the body, represented by insomnia, irritability, fatigue, difficulty in concentration, forgetfulness and somatic complaints.[11,12]

Symptoms vary considerably between individuals and there may be a combination between them.[13,14] In addition to mental and physical suffering, they are more likely to be incapable of working, generating lower productivity and performance, and additional costs to institutions.[9,15]

There is evidence that several factors trigger this disorder in health professionals, among which the accelerated pace, long and exhausting working hours and intense responsibility for the tasks performed. Everything can interfere in the quality of care and in patient care, generating repercussions on organizational indicators.[1,16]

Common mental disorders are associated with professional burnout, as it harms the person's physical and emotional aspects given the excessive energy demands. The environment of critically ill patient care favors occupational stress due to the work dynamics, pressure from activities and conflicting feelings, such as death.[9]

Although this is an important public health problem in the world today, studies on the subject in the national scientific literature are lacking.[12]

In this sense, investigating the presence of these disorders in nursing professionals is essential to support measures to protect workers' mental health with a focus on safe and quality care for patients and therefore, ensure better functioning of health care services.[16]

Considering the relevance of this theme for the organization and planning of mental health care actions, the aim of this study is to analyze the sociodemographic and work variables regarding the risk of common mental disorders in nursing professionals working in emergency and urgency care services.

Methods

Observational, cross-sectional, quantitative study conducted in urgent and emergency care services in the countryside of Minas Gerais, Brazil. The studied institutions were a public teaching hospital linked to the Universidade Federal do Triângulo Mineiro - UFTM and two public Emergency Care Units (Portuguese acronym: UPA). The hospital has 302 active beds and is a high complexity, reference institution to 27 municipalities that make up the Triângulo Sul health macro-region. Through the National Health Service (Brazilian SUS), about 73% of all medium and high complexity cases in the macro-region and 100% of high complexity cases in the city and other states of the country are served at this hospital.[17] The study was conducted in the sectors of the Adult Intensive Care Unit (ICU - A), Coronary Intensive Care Unit (ICU - C) and Adult Emergency Room (AER).

The UPA are intermediate complexity, secondary size health centers between the Basic Health Centers/Family Health and the Hospital Network of emergency care, each one with at least 11 observation beds and average service capacity of 250 patients per day.[18]

All nursing professionals (n=342) working in the aforementioned services were included. Workers on vacation, on leave or away from work, or who did not return within the three-month period of data collection were excluded. Individuals in the population who worked in two of the study institutions were excluded from one, guaranteeing the professional's participation only once. Of the total number of employees, there was a loss of 11.7% (40 subjects), considering vacation/leaves of absence and refusals to participate, totaling a sample of 302 professionals.

Two self-administered instruments were used: Sociodemographic and Professional Questionnaire and the Self-Reporting Questionnaire (SRQ-20). The sociodemographic variables of the instrument were sex, age, marital status, having children, skin color/race. The professional variables investigated were work department, position within the nursing team, number of employment engagements, contract regime and monthly income.

The SRQ-20 is an instrument created by Harding et al. in 1980, recommended by the World Health Organization (WHO) for measuring the indicative of CMD in community studies and primary health care, especially in developing countries. It assesses unspecified somatic complaints, insomnia, headache, irritation, fatigue, lapse and difficulty concentrating, and was validated in Brazil in 1986.[19]

This instrument is self-administered, easy to understand and quick to apply, consists of 20 questions, four referring to physical symptoms and 16 about psycho-emotional disorders for screening non-psychotic morbidity, with dichotomous scales (yes/no).[20,21] The score of this instrument ranges from 0 to 20; the total score equal to or less than 7 defines a negative case and equal to or greater than 8 is considered positive.[21]

The data collection period was from October to December 2018 and the instruments were applied face to face by the researcher and another collaborator who were duly trained in the instruments and approach of participants. Workers were approached at the workplace and after clarification about the study, the signature of the Informed Consent form was collected, and they responded to the instruments. Data were double entered into a Microsoft Office Excel® 2013 spreadsheet by different people and the spreadsheets were validated.

Descriptive statistics, bivariate analysis, Pearson's Chi-square, Fisher's exact, prevalence ratio (PR) and prevalence odds ratio (POR), and multivariate analysis using binomial logistic regression were used for data analysis. The last one was evaluated by the Hosmer-Lemeshow test (p=0.66), where the non-statistical significance guarantees consistency to the applied multivariate test. Statistical calculations were performed using the Statistic Package for the Social Sciences (SPSS), version 20.0. The significance level for the tests was 0.05%.

This study was approved by the Research Ethics Committee of the institution under opinion number 2.898.305/2018 and CAAE 92040318.3.0000.5154.

Results

The study included 302 nursing professionals; most worked in the UPA, 176 (58.3%), and nursing technicians prevailed, accounting for 220 (72.8%) individuals. The prevalent sociodemographic variables were female, 238 (78%); age between 18 and 39 years, 191 (63.2%); white skin color, 171 (56.6%); without a partner, 153 (50.6%); and with children, 179 (59.4%), as shown in table 1.

Most professionals, 216 (71.5%), declared a single employment engagement, with an employment contract regime by the Labor Law, 282 (93.4%). The prevailing monthly income was six minimum wages, 258 (85.5%). Among the nursing team professionals, screening for CMD was positive in 62 (20.5%) subjects (Table 1).

The association between sociodemographic variables and the risk for CMD showed that the variables sex, age group, marital status and "without children" were more closely related to the development of CMD. However, only the variable "without children" showed a statistically significant association, p=0.025 (Table 2).

As for variables, the nurse position, working in the Adult ICU and ER (tertiary care) departments and having a statutory contract regime presented greater chances of developing CMD. There was statistical significance for the Adult ICU and AER departments, p=0.008, and statutory contract regime (Table 2).

In the multivariate analysis, when adjusting the variables for POR (Exp(B)), the variables depart-

Table 1. Distribution of sociodemographic and professional variables of nursing workers in urgency and emergency departments (n= 302)

Variables	n(%)
Sex	
Male	64(21.2)
Female	238(78.8)
Age	
18 to 39 years	191(63.2)
40 to 59 years	106(35.1)
> 60 years	5(1.7)
Marital status	
With partner	149(49.4)
No partner	153(50.6)
Children*	
None	101(36.1)
1 or more	179(63.9)
Skin color/race	
White	171(56.6)
Black	38(12.6)
Asian	4(1.3)
Mixed race	89(29.5)
Work department	
PSA and ICU	126(41.7)
UPA	176(58.3)
Position	
Nurse	82(27.2)
Nursing technician	220(72.8)
Number of employment engagements**	
01 job	216(71.5)
02 jobs	84(28.5)
Contract regime	
Statutory	20(6.6)
Labor Law	282(93.4)
Monthly income***	
1-2 minimum wages	93(30.8)
3-6 minimum wages	165(54.7)
Above 6 minimum wages	43(14.2)
Risk for CMD	
Yes	62(20.5)
No	240(79.5)

* Variable without children with 7.3% loss (n=280); ** Variable number of employment engagements with 0.6% loss (n=300); ***Variable income with 0.3% loss (n=301)

Table 2. Association between sociodemographic and professional variables and CMD among nursing workers in urgency and emergency departments (n= 302)

Variables	CMD		RP (IC)	RCP (IC)	p-value
	Yes n(%)	No n(%)			
Sex					
Female	54(22.7)	184(77.3)	1.82 (0.91 - 3.62)	2.05 (0.92- 4.57)	0.073*
Male	8(12.5)	56(87.5)			
Children					
None	33(26.8)	90(73.2)	1.65 (1.063 - 2.58)	1.89 (1.08 - 3.33)	0.025*
1 or more children	29(16.2)	150(83.8)			
Age group					
49 years or more	10(24.4)	31(75.6)	1.22 (0.67 - 2.21)	1.29 (0.59 - 2.81)	0.51*
Up to 48 years	52(19.9)	209(80.1)			
Marital status					
With partner	35(22.9)	118(77.1)	1.26 (0.80 - 1.97)	1.34 (0.76 - 2.35)	0.306*
No partner	27(18.1)	122(81.9)			
Position					
Nurse	21(25.6)	61(74.4)	1.37 (0.86 - 2.17)	1.50 (0.82 - 2.74)	0.182*
Nursing technician	41(18.6)	179(81.4)			
Department					
ICU + PSA	35(27.8)	91(72.2)	1.81 (1.15 - 2.83)	2.12 (1.20 - 3.73)	0.008*
UPA	27(15.3)	149(84.7)			
Contract regime					
Statutory	8(40.0)	12(60.0)	2.08 (1.16 - 3.76)	2.81 (1.09 - 7.22)	0.041**
Labor Law	54(19.1)	228(80.9)			

*Pearson chi-square; $\alpha = 0.05$; **Fisher's Exact Test

ment (ICU and AER), position and income obtained a statistically significant association p=0.001 (Exp(B): 4.21); p=0.017 (Exp(B): 2.80); p=0.021 (Exp(B): 0.57), respectively. As for consistency with a confidence interval above 1, it was presented by department (95% CI: 1.84-9.63) and position (95% CI: 1.20-6.52). Income had a 95% CI ranging from 0.35 to 0.92 (Table 3).

Table 3. Binomial logistic regression between sociodemographic and professional variables and CMD among nursing workers in urgency and emergency departments

Variables	Exp(B)	95% CI /Exp(B)		p-value
		Inferior	Superior	
Department	4.21	1.84	9.63	0.001
Contract regime	2.38	0.76	7.44	0.133
Partner	1.44	0.79	2.61	0.227
Sex	1.93	0.83	4.46	0.123
Position	2.80	1.20	6.52	0.017
Income	0.57	0.35	0.92	0.021
Age	0.99	0.95	1.02	0.718

Discussion

In this study, the prevalence of CMD represented 20.5%, which is higher than the 18.7% prevalence found in a population-based study conducted with 848 women by means of a household survey in Campinas-SP.[22] However, other national studies showed higher prevalence rates, two of which were performed with nursing professionals in hospitals; one in a psychiatric hospital with 25.7% and the other with 285 workers from a general hospital in Paraná, Brazil, with 32.6% of CMD.[23,24]

The aim of a systematic review study conducted in the United Kingdom was to estimate the prevalence of CMD among professionals, and it showed higher CMD rates in nurses compared to physicians, 38.2% and 31.6%, respectively.[25]

In another study of 280 nursing technicians from a university hospital in the north of Minas Gerais, Brazil, the prevalence of CMD was 46.9%, highlighting the relationship between work and the occurrence of mental disorders in professionals.[26]

A study of 385 nursing professionals in France reaffirms this reality by identifying that nurses working in Emergency Units, Post-anesthetic Recovery and the ICU have a high level of demand and a low level of control of work stress, regardless of sex. In addition, nurses with higher levels of qualification suffered greater pressure at work and had a lower level of control, regardless of the intensive care setting.[27]

The bivariate analysis with sociodemographic variables in this study showed that females were twice as likely to have CMD than males, although this was not statistically significant, as found in another study in which the Chi-square and Fisher's exact were applied.[28] The prevalence of CMD in the female population can be attributed to the double roles occupied at work and the burden of the family, making them more susceptible to illness and mental disorders.[24,29]

The higher occurrence of CMD among women may be related to the responsibilities attributed to them, such as taking care of children and the family, combined with professional activities with long working hours and insertion in more precarious

jobs. Thus, they are more prone to stress, anxiety and mental disorders.[10,24,29,30]

Professionals over the age of 49 years were at higher risk for CMD, in line with a study conducted in Germany, where the relationship between age and psychosomatic complaints of health workers increased according to the advanced age group.[31]

As for marital status, in this study, the variable having a partner represented a greater chance of developing CMD, although there was no statistical association. This finding is contrary to another study in which separated, divorced or widowed women had a 67% higher prevalence of mental disorders than married women.[22]

Regarding the children variable, professionals without children had a greater chance of developing CMD, contrary to another study of 3,084 primary and medium-complexity care workers in five municipalities in Bahia, which showed that professionals who have children were more likely to develop CMD.[32]

Studies reinforce this reality and highlight that the higher prevalence of mental illness in women who have children may be triggered by the double work shift, as women are assigned the responsibility of taking care of their children and family, in addition to their professional activities.[10,32] However, this study findings were in the opposite direction to that indicated in the literature, since the highest prevalence of CMD was associated with professionals without children.

In the professional variables, nursing workers in the ICU-A and AER (tertiary care) departments were twice as likely to have an indication for CMD than workers in the UPA (secondary care), which is justified by the complexity of nursing care and the work overload in hospitals.[12,13,27, 28,33]

The ICU is historically considered a stressful environment for patients, family members and health professionals. The stress represented by the department occurs mainly because this is a closed environment, marked by feelings of sadness, suffering, unpredictability, in addition to the fast pace of work, excessive workload and demanding routines.[13,33]

A study conducted in 15 Polish hospitals with 406 intensive care nurses and 138 intensive care physicians identified significantly higher stress levels in nurses, and female professionals presented higher stress levels than male professionals.[33]

In this investigation, the contract regime variable indicates that the statutory professional is twice more prone to having CMD than the professional governed by the Labor Law, thereby inferring that this professional may receive a lower salary than the statutory professional, since in the multivariate analysis, low income behaved as a protective factor for CMD. This datum goes in the opposite direction to another study that indicated low-income professionals were more likely to develop CMD.[28]

According to the literature, jobs with stable contracts represent greater security for professionals, making them more protected compared to temporary workers/non civil servants. However, despite the stability of the employment relationship, workers face professional devaluation, low wages and precarious working conditions, favoring mental illness.[10,26,30]

Binomial logistic regression also showed that the ICU - A and AER departments and the position of nurse are variables that affected the risk for CMD among the nursing professionals studied.

The work environment impacts the mental health of nursing professionals in relation to work overload, problems with the institution, lack of material resources and labor, dissatisfaction and impairment in patient care and also triggers diseases such as migraine, stress, hypertension, musculoskeletal pain and insomnia.[30]

A study conducted during the COVID-19 pandemic in nine hospitals in the United Kingdom with ICU workers had 709 participants. Most (344) were nurses and in logistic regression, nurses were the most likely professionals to achieve depression thresholds (moderate and severe), probable post-traumatic stress disorder and anxiety (moderate and severe).[34]

Critical sectors such as the ICU, Surgical Center and Emergency department are units that require attention and care from nursing workers, especially regarding the daily work overload, physical and emotional damage and lack of time for rest.[35]

Nursing professionals deserve attention regarding mental health, as they are exposed to various

types of stress such as quick and assertive decisions, critical health status of patients by dealing with death and issues of conflicting relationships at work, which require mental health intervention with the category.[12]

The findings of this study also show that these departments offered 4.2 times more risk of developing CMD than the others. This corroborates the literature that has shown the intensive and emergency care departments as unhealthy and prone to psychological imbalance.[1,12,18, 27,29, 30,33-35]

In this study, a limitation of the results was the cross-sectional design that does not allow inferences of causality, since data are collected in a single moment. Another limitation refers to the population's eligibility for the study; no sample calculation was applied. Issues such as pre-existing diseases, education, working hours and time of service were also not checked in the sociodemographic and professional variables, which prevented other correlations of variables.

Conclusion

The prevalence for common mental disorders was 20.5%. In response to the research question, the variables ICU - A and AER departments and the nurse position behaved as a risk for indicative of common mental disorders with a prevalence odds ratio of 4.21 and 2.80, respectively. Work environment conditions such as work overload, associated with the psychological demands of care for critically ill patients configure the occupational daily life of nursing professionals and may favor the development of common mental disorders. This study calls for attention to workers in these units, since common mental disorders can harm the worker's mental health pattern and negatively impact professional practice, putting both patient care and health itself at risk. We hope the results of this study may encourage further investigations on the variables and risks to the health of nursing workers who perform their work activities in urgent and emergency care services, and assist in the adoption of strategies for the early identification of CMD and promotion of mental health of health professionals, aiming to control psychosocial aspects at work.

Collaborations

Moura RCD, Chavaglia SRR, Coimbra MAR, Araújo APA, Scárdua SA, Ferreira LA, Dutra CM, Ohl RIB contributed to the project conception and design, data analysis and interpretation; article writing and critical review of important intellectual content; final approval of the version to be published.

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