Common mental disorders in nursing technicians of a university hospital

Transtornos mentais comuns em técnicos de Enfermagem de um hospital universitário
Trastornos mentales comunes en técnicos de enfermería en un hospital universitario

**ABSTRACT**

**Objective:** To verify the prevalence of common mental disorders and associated factors in nursing technicians. **Method:** Cross-sectional analytical study conducted at a university hospital. A questionnaire with sociodemographic, educational and work-related variables and the Self Reporting Questionnaire-20 were used to verify the presence of common mental disorders. Association analysis was performed using the chi-squared test, with a significance level of 5%. **Results:** 280 nursing technicians participated in the study. The prevalence of common mental disorders was 46.9%. The variables family income (p=0.021) and working exclusively in health area (p=0.001) were associated with the outcome. There was a higher prevalence of CMD among individuals with a family income below four minimum wages (PR=1.41) and among professionals who worked exclusively in the health area (PR=1.95). **Conclusion:** Approximately half of the nursing technicians of the university hospital presented common mental disorders, which were associated with economic and work-related variables.

**RESUMEN**

**Objetivo:** Verificar la prevalencia de trastornos mentales comunes en técnicos de enfermería y factores asociados. **Método:** Estudio transversal, analítico, realizado en un hospital universitario. Utilizaron un cuestionario compuesto por variables sociodemográficas, de formación y ocupacionales y el Cuestionario de Autorreporte de Síntomas-20 para comprobar la presencia de trastornos mentales comunes. Realizó un análisis de asociación por medio del test de qui-cuadrado, con nivel de significación de 5%. **Resultados:** Participaron 280 técnicos de enfermería. La prevalencia de trastornos mentales comunes fue de 46,9%. Las variables renda familiar (p=0.021) e trabajo exclusivo no área de saúde (p<0,001) apresuraram-se associadas ao desfecho. Observou-se maior prevalência de TMC entre os indivíduos com renda familiar inferior a quatro salários mínimos (PR=1,41) e entre os profesionales que trabajaban exclusivamente en la área de salud (PR=1,95). **Conclusión:** Aproximadamente la mitad de los técnicos de enfermería del hospital universitario presentaron trastornos mentales comunes, asociados a aspectos económico y ocupacional.

**RESUMEN**

**Objetivo:** Comprobar la prevalencia de trastornos mentales comunes en técnicos de enfermería y los factores asociados. **Método:** Se trata de un estudio transversal, analítico, realizado en un hospital universitario. Se utilizó un cuestionario compuesto por variables sociodemográficas, de formación y ocupacionales y el Cuestionario de Autorreporte de Síntomas-20 para comprobar la presencia de trastornos mentales comunes. Se llevó a cabo el análisis de asociación mediante la prueba chi-cuadrado, con nivel de significación del 5%. **Resultados:** Participaron 280 técnicos de enfermería. La prevalencia de trastornos mentales comunes alcanzó el 46,9%. Las variables ingreso familiar (p=0,021) y trabajo exclusivo en el área de la salud (p<0,001) estaban asociadas al desenlace. Fue posible observar una mayor prevalencia de TMC entre los individuos con ingresos familiares inferiores a cuatro sueldos mínimos (RP=1,41) y entre los profesionales que trabajaban exclusivamente en el área de la salud (RP=1,95). **Conclusión:** Aproximadamente la mitad de los técnicos de enfermería del hospital universitario presentaron trastornos mentales comunes, asociados a aspectos económico y ocupacional.
INTRODUCTION

Work is important for the survival and personal achievement of individuals. However, it can also affect the worker’s lifestyle and even lead to health problems, such as mental illnesses (1–3). Among these, Common Mental Disorders (CMD) stand out and represent a serious public health problem due to their high incidence (4).

Work-related CMD have been addressed in several studies in recent years (4–6), as they are the third most common cause of sick leave in Brazil, with an annual rate of 6.2% of workers (5). This disorder frequently affects workers in various areas (1,5), including professionals who provide health care (4–6). Adversity in the workplace can contribute to mental illness (7). Nursing technicians are at risk of developing CMDs due to the peculiarities of their work - direct contact with difficult-to-manage patients, high psychological demand, low autonomy at work, low salaries, long working hours, fear of making errors during care, precarious working conditions - which can lead to work overload and chronic stress (8–10).

The presence of CMD in nursing technicians can affect the quality of patient care and the relationships within the work team and with the family and the community, reduce job satisfaction, damage the health of the professional, increase absenteeism, and generate additional costs to the institutions (11–13). Therefore, it is essential to investigate the presence of common mental disorders among nursing technicians working in hospitals, as this is a professional category with a large representation in health care. Studies on this topic should be carried out in different settings, due to regional, social, economic and cultural diversity. This knowledge can support the implementation of measures to protect the mental health of workers and, consequently, improve the functioning of health care.

OBJECTIVE

To verify the prevalence of common mental disorders and associated factors among nursing technicians of a university hospital in Montes Claros - MG.

METHOD

Ethical Aspects

The ethical conduct of this study is in accordance with the norms established in Resolution No. 466/12 of the National Health Council on Research involving Human Beings. The project of this research was approved by the Research Ethics Committee (REC) of the State University of Montes Claros - Unimontes. The Research Support Office of the hospital authorized this study by signing the institutional consent form. The study participants signed the Informed Consent Form.

Design, setting and study period

This is a cross-sectional and analytical study conducted at a university hospital in Montes Claros, northern Minas Gerais. The institution has 172 beds and a structure for urgent and emergency care, a maternity ward and hospitalization in various clinical and surgical areas, including mental health, semi-intensive and intensive adult care, neonatal and pediatric treatment. The hospital has a distinguished history in the path of public health in the northern region of the state and sets the benchmark for the training of human resources in health. This research was conducted in September and October 2015.

Population, inclusion and exclusion criteria

In the year of data collection, the hospital had 300 nursing technicians, which were invited to participate in the research and constituted the study sample. Inclusion criterion was working as a nursing technician. Professionals who were on leave or vacation were excluded.

Study protocol

Data was collected by previously trained nursing students. The instrument was a self-administered questionnaire with socio-demographic, educational and work-related variables. The Self Reporting Questionnaire (SRQ-20) was used to verify the presence of CMD. The SRQ is an instrument developed by the World Health Organization to identify possible cases of CMD. Originally, the questionnaire consisted of 30 questions, 20 related to psychosomatic symptoms, for identifying non-psychotic disorders, four for screening psychotic disorders, one asking about tonic-clonic seizures and five questions about disorders by the use of alcohol. Due to the low sensitivity of self-administered instruments for tracking psychosis and seizures, the questions related to these conditions have fallen into disuse. The SRQ-20 is the SRQ version for the identification of CMD; it contains 20 questions which have to be answered by yes or no. It was validated in Brazil by Mari and Williams (17). The score is obtained by simply counting the affirmative answers and it can range from 0 (minimum probability of CMD) to 20 (maximum probability of CMD). In this study, the cutoff score ≥7 was used to identify possible cases of CMD (17–18). This score presents a sensitivity of 83% and a specificity of 80%. It is worth noting that this is a screening instrument, and not a diagnosis.

Analysis of results and statistics

Data analysis was performed in the Statistical Package for Social Sciences for Windows (SPSS, version 20.0). Descriptive analysis was based on absolute and relative frequency. Bivariate analysis was performed to assess the association between the independent variables and CMD, through the chi-squared test. Independent variables associated with CMD with a significance level of less than 20% (p≤0.20) were included in the multiple analysis. Subsequently, a multiple analysis with Poisson regression with robust variance was conducted. In the final adjusted model, variables with a significance level of less than 5% (p≤0.05) were maintained. Adjusted prevalence ratios and their respective 95% confidence intervals were estimated.
RESULTS

A total of 280 nursing technicians participated in the study. The non-response rate was 6.6%. The professionals were mostly female (58.6%), married (62.5%) and with family income between one and three minimum wages (68.2%). The mean age was 38.5 years (± 6.84). Regarding training and professional data, most of the participants had completed high school (60.4%), had no other employment (60.4%) and worked exclusively in health (67.1%). Nursing technicians had a mean time of work of 12.8 years (Table 1).

Table 1 – Socio-demographic characteristics of nursing technicians of a university hospital, Montes Claros, Minas Gerais, Brazil, 2015 (N=280)

| Variables                        | n  | %  |
|----------------------------------|----|----|
| Gender                           |    |    |
| Male                             | 115| 41.1|
| Female                           | 164| 58.6|
| Civil status                     |    |    |
| Single                           | 68 | 24.3|
| Married                          | 175| 62.5|
| Stable union                     | 4  | 1.4 |
| Separated/divorced               | 29 | 10.4|
| Widowed                          | 4  | 1.4 |
| Skin color                       |    |    |
| White                            | 40 | 14.3|
| Brown                            | 105| 37.5|
| Black                            | 60 | 21.4|
| Yellow                           | 2  | 0.7 |
| Missing                          | 1  | 0.4 |
| Religion                         |    |    |
| Catholic                         | 179| 63.9|
| Evangelical                      | 93 | 33.2|
| Spiritist                        | 2  | 0.7 |
| Other                            | 1  | 0.4 |
| No religion                      | 5  | 1.8 |
| Family income                    |    |    |
| Less than 1 minimum wage         | 3  | 1.1 |
| 1 to 3 minimum wages            | 191| 68.2|
| 4 to 5 minimum wages            | 80 | 28.6|
| More than 5 minimum wages        | 6  | 2.1 |
| Level of education               |    |    |
| Complete elementary school       | 1  | 0.4 |
| Complete high school             | 169| 60.4|
| Incomplete higher education      | 50 | 17.9|
| Complete higher education        | 60 | 21.4|
| Other employment                 |    |    |
| Yes                              | 110| 39.3|
| No                               | 169| 60.4|
| Missing                          | 1  | 0.4 |
| Working exclusively in health area|    |    |
| Yes                              | 188| 67.1|
| No                               | 92 | 32.9|

The prevalence of possible cases of CMD among the nursing technicians was 46.9%. Figure 1 shows the frequency of affirmative answers of the professionals in the SRQ-20. It was observed that 7.5% of the participants had 6 affirmative answers, 5.7% had seven and 40.7% had more than seven.

Table 2 – Association analysis between Common Mental Disorders and independent variables among nursing technicians of a university hospital, Montes Claros, Minas Gerais, Brazil, 2015 (N=280)

| Variables                        | Present n | %  | Absent n | %  | p value |
|----------------------------------|-----------|----|----------|----|---------|
| Gender*                          | 80        | 60.6| 84       | 56.8| 0.538   |
| Age                              | 95        | 73.6| 100      | 68.0| 0.307   |
| Civil status                     | 52        | 39.4| 49       | 33.1| 0.274   |
| Religion                         | 130       | 98.5| 145      | 98.0| 0.747   |
| Level of education               | 131       | 99.2| 148      | 100.0| 0.289   |
| Family income                    | 33        | 25.0| 53       | 35.8| 0.050   |
| Time of work                     | 73        | 55.3| 78       | 52.7| 0.663   |
| Working exclusively in health area| 103       | 78.0| 85       | 57.4| <0.001  |

Note: *missing.
Nursing professionals are at risk of developing these disorders, community health workers from the Family Health Strategy teams in Brazil, healthcare technicians higher prevalence of CMD among individuals with family income of less than four minimum wages (PR=1.41) and those working exclusively in health (PR=1.95).

Table 3 – Results of the multiple analysis association between Common Mental Disorders and the investigated variables among nursing technicians, Montes Claros, Minas Gerais, Brazil, 2015

| Independent Variables | PR      | 95%CI   | p value |
|-----------------------|---------|---------|---------|
| Family income         |         |         |         |
| Four minimum wages or more | 1       |         |         |
| Less than four minimum wages | 1.41   | 1.05-1.89 | 0.021   |
| Working exclusively in health |         |         |         |
| No                    | 1       |         |         |
| Yes                   | 1.95    | 1.39-2.73 | <0.001  |

Note: PR: Prevalence Ratio; 95% CI: 95% Confidence Interval.

DISCUSSION

This study found CMD in approximately half of the nursing technicians of a university hospital in Montes Claros – MG. The association between work and illness due to mental disorders has been observed in national[11,19] and international studies[20]. Nursing professionals are at risk of developing these disorders, since they constantly experience situations of suffering, stress and anxiety[11,15].

Health workers are exposed to stressful situations in their daily practice, such as direct contact with illness, pain and suffering of patients and their families, excessive responsibility, non-harmonious interpersonal and hierarchical relationships, very long working hours, strenuous work, low salaries, night shifts, lack of material, among others[2,7,11,18,21-22].

This study found a higher prevalence of CMD than a study with nursing workers of a public hospital in Bahia[11]. Previous studies with healthcare workers in primary care also found lower rates of CMD[23,13]. The psychosocial aspects of the work of these professionals make them vulnerable to CMD and may lead to absenteeism, longer sick-leaves and social security benefits[2,13,20]. This situation may have negative impacts on institutions and on society. Mental disorders can affect the workers’ general health status and the quality of the care provided by these professionals[2,7,11,18,21-22].

It was observed that 7.5% of participants were on the alert for CMD, as they had six positive answers. These findings are a warning for the percentage of professionals on the edge of mental disorders. Thus, because they are subject to daily stress, emotional demands and physical and psychological risks[11,19], measures to protect mental health must be quickly implemented[20].

Family income was significantly associated with CMD, with a higher prevalence of CMD among individuals with family income of less than four minimum wages. In Brazil, healthcare technicians have lower wages, which can lead to demotivation[23].

This association was also observed in a study conducted with community health workers from the Family Health Strategy teams in Montes Claros – MG[6]. Income is a factor that can affect the mental health of professionals, causing stress and insecurity, since, when living with a low salary, the individual is deprived of participating in activities that require financial resources, such as leisure activities, or is required to have more than one job, resulting in emotional distress, mental disorders and illness, all with the expectation that a higher income would provide better living conditions[21,28].

For many professionals, the choice for a technical vocational education was due to their financial conditions at the time. In the national scenario, professional and vocational education courses are options to access a better life. However, many nursing technicians want to change career and find a better paying and socially valued work, with the objective of improving their living conditions[25,27]. Thus, the idealization of the profession conflicts with the reality, which is often very distant from their dream work. They stay in the profession because they need the work to support themselves[27]. This situation can generate dissatisfaction, frustration and demotivation.

The search for increased income by technicians may occur by taking on other paid activities in parallel with their employment contract, in the health sector or outside it[25].

Working exclusively in health area was statistically associated with CMD. Healthcare jobs require different work dynamics, greater attention, joint and coordinated work, constant and close contact with patients with serious diseases and with death, and involve a strong emotional demand[7,15]. The work of the nursing technician in the hospital involves a high number of procedures, a lot of contact with patients, low salaries and long standing periods, which can be stressors for these workers[21,22]. In addition, this professional category constantly deals with hierarchy of functions and knowledge, which can generate conflicts and paradoxes in work relations. Process control is limited because they perform actions arranged by other health professionals and do not directly participate in decisions related to their work, which affects their autonomy within the work process and interferes with the construction of knowledge[27].

Study limitations

This study should be interpreted considering the limitations of the cross-sectional design and of the hospital scenario, which preclude the cause and effect relationship and the generalization of results, respectively. The exclusion of professionals who were on leave or vacation may have underestimated the prevalence of CMD in this study.

Contributions to the areas of nursing, health or public policies

The nursing professional, actor of care, is essential for a comprehensive care to individuals in hospitals. Their job is to provide quality of care, which, in turn, depends on their health condition. In the face of the high prevalence of CMD among nursing technicians found in this study, health managers must develop actions aimed at protecting and promoting mental health. Workers’ health policies should consider the peculiarities of the work of the nursing technician.
Regular clinical supervisions are an important tool, as they can provide professional support in order to reduce stress, increase satisfaction and preserve the emotional and mental integrity of health workers. Organizations should be aware of the need to provide regular clinical supervision and workers should not neglect them. It is essential to establish measures that value the work of technicians, with career plans and better salaries.

CONCLUSION

In this study, the high prevalence of CMD among nursing technicians of a university hospital was verified and statistically associated with family income and working exclusively in health area. Further studies to investigate other aspects of the nursing technician’s mental health should be conducted.

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