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Prevalence of minor psychiatric disorders in nursing professors

Prevalência de distúrbios psíquicos menores em enfermeiros docentes

Prevalencia de trastornos psíquicos menores en enfermeros docentes

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Abstract

Objective: This study's objective was to identify the prevalence of minor psychiatric disorders (MPD) in nursing professors and verify the disorders' association with socio-demographic and occupational variables. **Methods:** Cross-sectional study involving 130 of the 177 nursing faculty members of federal universities in Rio Grande do Sul, Brazil. The Brazilian version of the Self-Report Questionnaire-20 was used to identify MPD. **Results:** The prevalence of MPD was 20.1%. Affirmative answers regarding experiencing nervousness, tension or worry were observed, as well as poor sleeping, tiring easily, frequent headaches, difficulty enjoying daily activities, poor digestion, feeling sad, and trouble thinking clearly. Socio-demographic and occupational variables were not associated with MPD. **Conclusion:** Managers, professors and union representatives of the studied universities need to assess the situation and seek to reduce mental sickening among nursing professors.

Keywords: Nursing; Faculty, Nursing; Mental Disorders; Occupational Health.

Resumo

Objetivo: O objetivo do estudo foi verificar a prevalência de Distúrbios Psíquicos Menores (DPM) em enfermeiros docentes e identificar sua associação com variáveis sociodemográficas e laborais. **Métodos:** Estudo transversal, envolvendo 130 dos 177 enfermeiros docentes de universidades federais públicas do Rio Grande do Sul. Utilizou-se a versão brasileira do *Self-Report Questionnaire-20* para identificação da suspeição de DPM. **Resultados:** A prevalência de DPM foi de 20,1%. Obteve-se maior frequência de docentes com respostas afirmativas quanto a sentir-se nervoso, tenso ou preocupado; dormir mal; cansar-se com facilidade; ter dores de cabeça frequentemente; encontrar dificuldade em realizar, com satisfação, suas atividades diárias; ter má digestão; sentir-se triste ultimamente e ter dificuldade de pensar com clareza. Características sociodemográficas e laborais não estiveram associadas à suspeição de DPM. **Conclusão:** É fundamental que gestores, docentes e representantes sindicais das universidades pesquisadas avaliem a situação apresentada, buscando reduzir o adoecimento psíquico dos enfermeiros docentes.

Palavras-chave: Enfermagem; Docentes de enfermagem; Transtornos mentais; Saúde do trabalhador.

Resumen

Objetivo: Verificar la prevalencia de Trastornos Psíquicos Menores (TPM) en enfermeros docentes e identificar su asociación con variables sociodemográficas y laborales. **Métodos:** Estudio trasversal, con 130 de los 177 docentes de universidades federales públicas de Rio Grande do Sul. Se utilizó la versión brasileña del *Self-Report Questionnaire-20* para identificar la sospecha de TPM. **Resultados:** La prevalencia de TPM fue de un 20,1%. Se obtuvo mayor frecuencia de docentes con respuestas afirmativas cuanto: a sentirse nervioso, tenso o preocupado; por dormir mal; cansarse con facilidad; tener dolores de cabeza frecuentemente; tener dificultad en realizar, satisfactoriamente, sus actividades diarias; tener mala digestión; haberse sentido triste actualmente; tener dificultad de pensar con lucidez. No se asociaron las características sociodemográficas y laborales con la sospecha de TPM. **Conclusión:** Es fundamental que gestores, docentes y representantes sindicales de las universidades investigadas evalúen la situación presentada, buscando reducir el sufrimiento por trastornos psíquicos de estos alumnos.

Palabras-clave: Enfermería; Docentes de enfermería; Trastornos mentales; Salud laboral.

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INTRODUCTION

Among the professions within the health field, nursing is the one most affected by occupational diseases. Of these, Minor Psychiatric Disorders (MPD)[1-3] are becoming increasingly common among nursing faculty[4].

Nursing professionals use the learning/teaching process in all their actions, including those directed to students, to the nursing staff, and to patients and their families[5]. Their practice is permeated by effects accruing from the roles they play as educators and nurses, which may lead to physical and psychological overload and affect their psychiatric health.

The work of nursing professors presents some peculiar situations: multiple activities, institutional pressure, relationship problems among peers, and lack of student interest, in addition to overcrowded classrooms[6]. Additionally, these workers have little opportunity for rest, leisure time or time to stay with their families[7]. Scarcity of time is explained by the fact that the work of faculty nurses is measured by production, the products of which includes lectures, advising students in research, publications, projects, patents, and research, among other measures. The need to produce increasingly more every year, associated with control mechanisms and rewards, lead to the intensification of work, which consequently becomes unstable[8]. Such factors may lead workers to experience dissatisfaction and even illnesses.

It is in this context that MPD should be considered because many individuals cannot tolerate such pressure and demands. Additionally, these disorders are difficult to characterize because, in general, they are attributed to multiple causes and their manifestations involve sorrow, anxiety, fatigue, reduced concentration, somatic worry, irritability, and insomnia[9], symptoms that are not always associated with this psychiatric disorder.

According to estimates reported by the World Health Organization (WHO), MPD affect about 25% of the workers, ranging from 8% to 30%, and severe mental disorders affect from 5% to 10%[10]. One study addressing Brazilian works published from 2000 to 2009 and that assessed MPD using the Self-Report Questionnaire reports 41 revised studies, 16 of which were occupation-related[11]. The highest prevalence of MPD (55.9%) was found among teachers in the public municipal school[4]. Such disorders were also observed among nursing professionals, ranging from 18.7% to 33.3%[1-3]. We verified, however, that how working conditions affect these workers (educators and nurses) is poorly assessed, especially in the sphere of college education.

Considering changes in higher education in recent years, that teaching activities, research, and extension activities have been commercialized, poor working conditions and increased workload have been observed, together with the growing number of psychiatric disorders affecting the Brazilian population, which are the second most frequent reason for sick leave, it is urgent to investigate the psychiatric health of faculty nurses. For that, we sought to answer the questions: what is the prevalence of MPD among faculty nurses in public federal universities and with what characteristics are these disorders associated? Consequently, we delineated the objectives to verify the prevalence of Minor Psychiatric Disorders among faculty nurses of public federal universities in Rio Grande do Sul, Brazil and identify associations among these disorders and socio-demographic and occupational variables.

METHOD

This cross-sectional epidemiological study was developed with faculty members from the undergraduate nursing programs of seven federal universities in Rio Grande do Sul, Brazil. Of the 177 nursing faculty members, temporary professors (substitute professors) and those on sick leave or any type of leave at the time of data collection were excluded. Hence, a total 144 faculty members were eligible. Of these, 130 (90%) answered the questionnaire; 10% refused to take part in it.

Data collection was conducted during working hours by four nursing students and three nurses. To minimize bias, the interviewers were previously trained by the study's coordinator in regard to the study's objectives, the instrument, and data collection. Each of the interviewers received a folder containing: a manual of instructions; a list of professors to interview; instruments; free and informed consent forms; and pens. Each interviewer was responsible for one institution and to contact the professors, clarify the study's objectives and justification, verify the interest of these individuals to participate in the study and ask them to sign the consent forms, and deliver and collect the completed instrument. Data were collected at two points in time: from December 2009 to January 2010 and from May to July 2010. These two periods were necessary because the faculty of some of the institutions were on vacation during the first period. For this reason, we decided to finish collection at the end of the first school semester of 2010, a time when occupational characteristics would be similar to the end of the school year.

A structured questionnaire addressing socio-demographic and occupational data (independent variables) was used together with the Brazilian version of the Self-Report Questionnaire-20 (SRQ-20)[12,13], which identifies suspicion of MPD (dependent variable). Epi-Info® version 6.4 was used to store data through independent double entry. After verification of errors and inconsistencies, data were analyzed using the Predictive Analytics Software (PASW Statistics®) version 18.0 for Windows.

The socio-demographic variables included: age (in complete years and subdivided into those from 26 to 47 years old and from 48 to 68 years old); sex (male and female); schooling (specialization/Master's and PhD/post doctorate); self-reported

race (Caucasian, Afro-Brazilian, Mixed); marital status (married and single/widowed); number of children (none, from one to two, and more than three children); *per capita* family income (times minimum wage and subdivided into those earning from up to six times the minimum wage and more than seven times the minimum wage). Occupational variables included: professional rank (assistant professor, *adjunto*[1] professor, full or associate professor); working hours (40 hours or 40 hours with no outside work); time working in the institution (less than one year, from one to ten years, from 11 to 20 years, more than 20 years); teaching activities (undergraduate or graduate/post graduate); extension activities (yes or no); number of students advised by the professor in the last semester (undergraduate, post-graduate, undergraduate research); social support received from colleagues and from the leadership (high and low)[14].

The Brazilian version of the Self-Report Questionnaire-20 (SRQ-20)[12] was used to assess MPD. It enables the early detection of signs and symptoms of mental health impairment among workers. This instrument is recommended by the WHO as a method to identify MPD. The SRQ-20 consists of 20 questions addressing symptoms and problems experienced in the 30 days prior the survey. Each alternative is scored either (0) or (1) where one (1) indicates symptoms were present in the last month and zero (0) indicates the absence of symptoms[13]. Based on previous studies conducted with nursing workers[1] and faculty[4], the cutoff point adopted was seven positive answers for both men and women.

Data were analyzed using descriptive and analytical statistics. The categorical variables were presented in tables in absolute and relative frequencies. The continuous variables were analyzed according to normal distributions (verified by the Kolomogorov-Smirnov test) and presented as central tendency measures (average and median) and dispersion (standard deviation and quartile intervals). The variables were subdivided using the mean or the median for asymmetric distributions.

The Chi-square or Fisher's exact test (when smaller than five cells) was used in the bivariate analysis among the categorical variables and MDP, to verify the statistical significance of associations ($p < 0.05$). The variables presenting $p \leq 0.25$ were included in the binary logistic regression analysis (Enter method). The measure of association used was the Odds Ratio (OR) and its respective confidence intervals (IC 95%). In all the analyses, associations were considered significant when $p < 0.05$.

Participation in the study was voluntary and all the faculty members who consented to take part in it signed free and informed consent forms. This study was authorized by all the institutions involved and was approved by the Institutional Review Board at the Federal University of Santa Maria (Certification Nº 0264.0.243.000-09) on November 17th, 2009, process Nº 23081.014364/2009-66.

RESULTS

Most of the nursing faculty members from the federal universities of RS were women (90.8%), and 47 years old (± 4.65 years old) on average; the minimum age was 26 years old and the maximum age 68 years old. Most had a PhD (56.9%) and reported being Caucasian (93.1%). In regard to their marital status, 74.6% were married, 50% had from one to two children, 50.5% had a *per capita* household income of up to six times the minimum wage (median 5.88), and 73.8% had up to three dependents.

In regard to occupational characteristics, 50% were *adjunto* professors, followed by 36.9% assistant professors; 93.1% worked 40 hr/week or 40 hours with no outside employment. In regard to time working in the institution, 30% had been working there for more than 20 years; 50.8% taught in the undergraduate program; while 49.2%concomitantly worked in both the undergraduate and graduate programs. In regard to research and extension activities, 91.5% and 85.4% of the professors performed these activities, respectively. In the last semester, 76.2% advised up to five undergraduates; 56.2% did not advise undergraduate students doing research, and 50% did not advise graduate students.

In regard to a second job, 98.5% of the nursing professors had only one job. Of the two professors (1.5%) who also taught in another institution, the additional weekly workload for one of them was of two hours and for the other professor it was four hours weekly. The second job was also teaching.

The prevalence of MPD among the nursing professors in the federal universities of RS was of 20.1%. Table 1 shows the percentage of affirmative answers provided to the SRQ-20:

The SRQ-20's questions with the highest number of affirmative answers were: Do you feel nervous, tense or worried? (49.2%); do you sleep badly? (39.2%); Are you easily tired? (37.7%); Do you often have headaches? (34.6%); and Do you find it difficult to enjoy your daily activities? (30.8%) - Table 1. Tables 2 and 3 present the prevalence of MPD, Odds Ratio (OR) and respective Confidence Intervals (CI), according to socio-demographic and occupational data.

Table 2 shows no significant difference was found among the groups ($p > 0.05$). It is important to note, however, that male professors, younger professors (26 to 47 years old), those single and with no children, and with lower *per capita* household income and with up to three dependents, presented a higher percentage of possible MPD.

The occupational variables presented in Table 3 show that the nursing professors who did not develop extension activities were more likely to present symptoms of MPD when compared to those who do perform extension activities ($p < 0.05$). The remaining occupational variables did not present significant statistical differences among groups ($p > 0.05$).

Table 1. Distribution of the nursing professors from federal universities from Rio Grande do Sul according to positive answers to the Self-Report Questionnaire-20 (SRQ-20). RS, 2010. (N = 130)

Self-Report Questionnaire-20 questions	Yes	
	N	%
1. Do you often have headaches?	45	34.6
2. Is your appetite poor?	09	6.9
3. Do you sleep badly?	51	39.2
4. Are you easily frightened?	22	16.9
5. Do your hands shake?	10	7.7
6. Do you feel nervous, tense or worried?	64	49.2
7. Is your digestion poor?	33	25.4
8. Do you have trouble thinking clearly?	27	20.8
9. Do you feel unhappy?	33	25.4
10. Do you cry more than usual?	08	6.2
11. Do you find it difficult to enjoy your daily activities?	40	30.8
12. Do you find it difficult to make decisions?	20	14.4
13.Is your daily work suffering?	16	12.3
14. Are you unable to play a useful role in life?	03	2.3
15. Have you lost interest in things?	16	12.3
16. Do you feel that you are a worthless person?	05	3.8
17. Has the thought of ending you life been on your mind?	01	0.8
18. Do you feel tired all the time?	33	25.4
19. Do you have uncomfortable feelings in your stomach?	25	19.2
20. Are you easily tired?	49	37.7

DISCUSSION

The prevalence of psychiatric disorders in nursing professors of federal universities of Rio Grande do Sul, Brazil was 20.1%; that is, one in every five active professors potentially has a mental disorder. This figure is greater than that found in studies addressing university faculty[15] and nursing workers[3], though it is less than what is found for elementary school teachers[4], physicians[14], and dentists[15]. This is a worrisome finding because these professionals are in direct contact with students and colleagues, which may negatively interfere in institutional success. Data presented by the WHO show that companies with healthy, satisfied and safe workers are also more successful[9].

One study conducted with elementary school teachers from Belo Horizonte, MG, Brazil reports that psychiatric disorders are the main (15%) disorder leading to sick leaves[16]. In 2009, in the state of Rio Grande do Sul, Brazil, a total of 24,533 health incidents were reported: 93.3% of these referred to occupational accidents and 6.7% to occupational diseases. Among these diseases, mental disorders are the second most frequent cause for sick leave (9.3%) surpassed only by work-related musculoskeletal disorders (55.1%). Data analysis concerning occupational diseases and social security benefits reveals that mental disorders are gradually becoming more common[17].

The various issues highlighted in Table 1 concerning nursing professors experiencing nervousness, tension, worry, lack of sleep, among other symptoms were also similarly reported in studies addressing elementary school teachers and nursing workers[3,4]. Currently, college professors are under constant pressure to keep updated, competitive, and produce increasingly more[18]; i.e., systematic assessments are implemented for professors to progress in their profession and to be admitted into and stay in graduate programs, submit papers for events and in quality international journals, among others. This number of requirements, in addition to the required academic and scientific activities such as teaching, research, extension and management activities, may generate dissatisfaction, discontentment and overload, contributing to wear for individuals and harming their physical and mental health[7].

Table 2. Distribution of nursing professors from federal universities in Rio Grande do Sul, Brazil with potential Minor Psychiatric Disorders (MPD), according to socio-demographic data. RS, Brazil 2010

Socio-demographic data	MPD					
	Yes N	%	OR†	CI‡		*p*£
Sex						
Male*	03	25.0	1.00	-	-	0.649
Female	23	19.5	1.380	0.345	5.493	
Age (N = 124)						
26-47 years old	14	23.7	1.370	0.577	3.271	0.472
48-68 years old*	12	18.5	1.00	-	-	-
Education						
Specialization/Master's*	07	13.5	1.00	-	-	0.128
PhD/Post Doctorate	19	24.4	2.070	0.801	5.350	
Race						
Caucasian*	24	19.8	1.00	-	-	0.863
Afro-Brazilian/Mixed	02	22.2	1.155	0.225	5.916	
Marital Status						
Married*	19	19.6	1.00	-	-	0.840
Single/widowed	07	21.2	1.105	0.417	2.926	
Nº of children (N = 125)						
None	11	24.4	2.103	0.409	10.804	0.639
1 to 2	13	20.0	1.625	0.325	8.113	
More than 3*	02	13.3	1.00	-	-	
Per capita household income* (N = 111)						
Up to 6 times MW	14	25.0	2.722	0.961	7.712	0.053
More than 6 times MW*	06	10.9	1.00	-	-	
Nº of dependents (N = 126)						
Up to 3	22	22.9	1.932	0.609	6.135	0.258
More than 3*	04	13.3	1.00	-	-	

* Reference category; † OR: Odds ratio; ‡ CI: Confidence interval; £ Chi-square.

In regard to the socio-demographic variables and percentage of MPD, one study conducted with nursing workers reports that female professionals up to the age of 35, with higher education, single, and receiving from three to four times the minimum age present a higher prevalence of MPD[2]. These results partially corroborate the ones found in this study since we also did not find significant association between socio-demographic characteristics and MPD, while a higher number of male professors were suspected of having MPD.

Another study also identified a higher frequency of MPD among younger nursing workers with lower income. This finding suggests that more experience allied with better knowledge concerning the work environment helps more experienced workers to cope with difficulties faced at work. Therefore, we confirm the role remuneration plays in regard to professional motivation and satisfaction, and consequently, in workers' mental health[3].

An association was observed between extension activities and potential MPD ($p = 0.047$), while nursing professors who do not perform extension activities are more likely to show signs of having MPD. There is, during extension activities, an exchange between academic and community knowledge, while this is an activity that derives from the social commitment of an institution seeking to minimize gaps between scientific and popular knowledge, which is also associated with teaching[19]. Therefore, we suggest that extension activities within the university enable

Table 3. Distribution of the nursing professors from the federal universities of Rio Grande do Sul potential MPD, according to occupational data. RS, Brazil 2010

Occupational variables	DPM					
	Yes N	%	OR†	CI‡		*p*£
Profession rank						
Assistant*	09	18.8	1.00	-	-	0.588
Adjunto	12	18.5	0.981	0.376	2.558	
Full/Associate	05	29.4	1.806	0.507	6.431	
Workload						
40 hours*	00	0.0	-	-	-	0.120
40 hours and e DE	26	21.5	4.421	0.00	0.00	
Time working in the institution						
Less than 1 year	04	17.4	1.316	0.291	5.949	0.468
01 to 10 years	11	28.2	2.455	0.693	8.700	
11 to 20 years*	04	13.8	1.00	-	-	
More than 20 years	07	17.9	1.367	0.360	5.197	
Teaching activities						
Undergraduate	14	21.2	1.167	0.493	2.761	0.726
Undergraduate and Graduate*	12	18.8	1.00	-	-	
Extension activities						
Yes*	19	17.1	1.00	-	-	0.047
No	07	36.8	0.354	0.123	1.017	
Research activities						
Yes*	26	21.8	-	-	-	0.098
No	00	0.0	0.00	0.00	0.00	
Undergraduate Research Advisor						
No students	03	25.0	2.500	0.348	17.941	0.613
01 to 05 students	21	21.2	2.019	0.428	9.574	
More than 05 students*	02	11.8	1.00	-	-	
Undergraduate research						
No students*	11	16.9	1.00	-	-	0.596
01 to 05 students	12	23.1	1.473	0.590	3.676	
06 to 12 students	03	27.3	1.841	0.420	8.061	
Graduate advise						
No students	15	20.5	1.121	0.283	4.445	0.613
01 to 05 students	8	20.5	1.118	0.255	4.895	
06 to 12 students*	3	18.8	1.00	-	-	
Social support						
Low social support	15	21.7	1.263	0.530	3.008	0.598
High social support*	11	18.0	1.00	-	-	

* Reference category; † OR: Odds ratio; ‡ CI: Confidence interval; £ Chi-square.

the creation of mechanisms that favor contact with people and promotes teaching, which may be a factor that maintain people's mental health.

These results reinforce the findings of other studies using the same instrument (SRQ-20). It is worth mentioning, however, that the context of teaching is more complex and not limited to the data analyzed. One of the questions that leads to many other questions is to what extent the required workload (teaching, research and extension) negatively impacts the health of faculty members?

In regard to this study's limitations we highlight several items: the study's design, i.e. the use of self-reported questionnaires; two different times of data collection; self-reporting was used to establish signs of MPD; and the fact that there are few studies for the purpose of comparisons. Cross-sectional studies do not allow for cause-effect inferences. Hence, reverse causality cannot be discarded. Self-reporting questionnaires allow individuals not to answer all the questions, and it must be considered that they may also forget to do so. Additionally, the questionnaires were applied at two different times, which despite being very similar and that no discrepancy was found, there may be bias. In regard to the fact that self-reporting was used to establish potential MPD, less intense signs and symptoms may have been overlooked by nursing professors, favoring underestimation. Regardless, the SRQ-20 is a valuable and important self-reported measure[13].

Finally, it is important to note that there are few studies addressing the health/illnesses of college professors. Though this gap hindered comparisons, this deficiency was overcome somewhat by comparing data found in studies conducted with nurses from hospitals and elementary school teachers.

CONCLUSIONS

This study enabled identifying signs of MPD in 20.1% of the nursing professors. Not all working situations were sources of weariness. Significant difference was, however, observed for potential MPD among nursing professors who did not perform extension activities. Further studies using other methodologies are required to clarify the nature of this prevalence and its association.

Regardless of additional studies, it is essential that managers of the studied universities and union representatives assess the situation with care and seek to reduce the psychiatric sickening of nursing professors. If MDP are not identified and properly treated, they pose risks to the workers. More specifically, mental overload may culminate in mental exhaustion, a situation in which the professor feels emotionally exhausted and work becomes meaningless, negatively affecting the work they perform or even leading them to abandon work.

In this sense, it is necessary for each professor to acknowledge the risk factors for occupational psychiatric diseases in order to intervene in and promote their health. There is also a need to construct and/or strengthen health services to be committed to the health of workers to facilitate the early detection of the harmful effects working conditions can cause and intervene in order to promote the health of these faculty members. Therefore, actions such as regular medical exams and medical and psychological support available to those requiring care are necessary, together with the creation of environments conducive to health, the development of individuals' skills and attitudes that favor health, and reorientation of health services, moving toward the implementation of health surveillance, among other advancements.

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[1] Brazilian federal universities have the following faculty ranks: Assistant professors with Master's degrees, *Adjunto* professors with a PhD degree, and Associate professors with at least 8 years since PhD.