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RESEARCH

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PROFILE OF NOTIFIED CASES OF WORK-RELATED MENTAL DISORDERS IN NURSES IN BRAZIL

Perfil dos casos notificados de transtornos mentais relacionados ao trabalho em enfermeiros no Brasil

Perfil de los casos notificados de trastornos mentales relacionados con el trabajo en enfermeros em Brasil

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ABSTRACT

Objective: to analyze cases of work-related mental disorders in nurses in Brazil, from 2018 to 2022. **Method:** ecological, retrospective study, carried out by collecting data on cases of nurses notified with work-related mental disorder in the Information System for Notification of Diseases of the Ministry of Health. **Results:** 270 cases were reported in nurses in the five years evaluated. Of these, 91.1% (n=246) were female, 59.6% (n=161) aged 30-49 years, 40% (n=108) had worked for years. The most reported diagnosis was neurotic, stress-related and somatoform disorders (46.3%; n=125). 48.15% (n=130) progressed to temporary disability. There was a significant association between work-related mental disorders and the use of alcohol, psychoactive substances and psychotropic drugs. **Conclusion:** There was an increase in the number of notifications of Work-Related Mental Disorders between the analyzed years.

DESCRIPTORS: Mental disorders; Estresse ocupacional; Nurses.

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RESUMO

Objetivo: analisar os casos de transtornos mentais relacionados ao trabalho em enfermeiros no Brasil, nos anos de 2018 a 2022. **Método:** estudo ecológico, retrospectivo, realizado por meio da coleta de dados sobre os casos de enfermeiros notificados com Transtorno mental relacionado ao trabalho no Sistema de Informação de Agravos de Notificação do Ministério da Saúde. **Resultados:** Foram notificados 270 casos em enfermeiros nos cinco anos avaliados. Destes, 91,1% (n=246) foram no sexo feminino, 59,6% (n=161) na faixa etária de 30-49 anos, 40% (n=108) com anos de tempo de trabalho. O diagnóstico mais notificado foi o de transtornos neuróticos, relacionados com “stress” e transtornos somatoformes (46,3%; n=125). 48,15% (n=130) evoluíram para incapacidade temporária. Houve associação significativa entre os transtornos mentais relacionados ao trabalho e o uso de álcool, substâncias psicoativas e psicofármacos. **Conclusão:** Verificou-se um aumento no número das notificações dos Transtornos Mentais Relacionados ao Trabalho entre os anos analisados.

DESCRITORES: Transtornos mentais; Estresse ocupacional; Enfermeiras e enfermeiros.

RESUMEN

Objetivos: analizar casos de trastornos mentales relacionados con el trabajo en enfermeros de Brasil, de 2018 a 2022. **Método:** estudio ecológico, retrospectivo, realizado mediante la recolección de datos sobre casos de enfermeros notificados con trastorno mental relacionado con el trabajo en el Sistema de Información para la Notificación de Enfermedades del Ministerio de Salud. **Resultados:** Se reportaron 270 casos en enfermeros en los cinco años evaluados. De estos, el 91,1% (n=246) eran del sexo femenino, el 59,6% (n=161) tenían entre 30 y 49 años, el 40% (n=108) trabajaba desde hacía años. El diagnóstico más informado fue el de trastornos neuróticos, relacionados con el estrés y somatomorfos (46,3%; n=125). El 48,15% (n=130) progresó a incapacidad temporal. Hubo una asociación significativa entre los trastornos mentales relacionados con el trabajo y el uso de alcohol, sustancias psicoactivas y drogas psicotrópicas. **Conclusión:** Hubo aumento en el número de notificaciones de Trastornos Mentales Laborales entre los años analizados.

DESCRIPTORES: Trastornos mentales; Estrés laboral; Enfermeras y enfermeros.

INTRODUCTION

The American Psychiatric Association, through the Diagnostic and Statistical Manual of Mental Disorders: DSM-5, classifies mental disorders as syndromes characterized by clinically significant disturbances in the processes of cognition, emotional regulation, or behavior that reflect a dysfunction in the psychological, biological, or developmental processes underlying mental functioning, which may lead to suffering and disability in social and occupational activities.¹

According to data from the Global Burden of Disease, mental disorders are among the most prevalent conditions worldwide,^{2,3}. Estimates show that such disorders account for 32.4% of disability-adjusted life years and 13% of disability-adjusted life years.⁴ In the distribution of disability-adjusted life years lost due to mental disorders, Brazil is among the countries with the highest rates.²

A variety of consequences are generated by the presence of these disorders. Among them are the economic impacts, which generate high costs every year for different societies around the world,⁵ as well as the individual repercussions, which directly compromise the quality of life of the affected person and their peers, and represent a factor for the shortening of life expectancy.⁶

Among healthcare professionals, it has been observed that nurses are susceptible to the development of work-related mental disorders (WRSD) and absenteeism, which is mainly related to the unfavorable working conditions to which they are usually

submitted, the lack of professional recognition of the category, low salaries, in addition to the long and exhausting working hours required by healthcare institutions. The presence of these disorders in nurses may act as a factor that negatively affects the quality of care provided to patients, and may be associated with increased risk of accidents and adverse events, highlighting the importance of prevention and early detection of cases.^{7,8}

Furthermore, the impacts observed on the mental health of nursing professionals during the pandemic caused by the new Coronavirus in 2019 (COVID-19),⁹ in which negative outcomes were observed in different parts of the world.¹⁰

In this context, addressing the profile and characteristics of work-related diseases and illnesses is an important tool to guide surveillance actions in worker health.

Given the above, the objective of this study was to analyze the cases of work-related mental disorders in nurses in Brazil between the years 2018 and 2022, since so far, no other study has investigated these notifications covering the entire Brazilian territory, which justifies its development. These results may contribute to the formulation of effective strategies for the prevention and control of this problem, as well as encourage further studies in the area.

METHOD

This is an ecological, retrospective, quantitative study, conducted with secondary data from notifications of work-related mental disorders among nurses, in the period from 2018 to 2022.

The target population of this study consisted of nurses, who were diagnosed and notified as a case of TRMT in Brazil. According to data from the Brazilian Institute of Geography and Statistics, Brazil has five regions (North, Northeast, Midwest, South, and Southeast), totaling 26 states plus the Federal District.¹¹

The refinement of the TMRT sample, in nurses, was performed by the selection of the occupation, through the Brazilian Occupation Code for nurses (2235-05). The variables used to describe the reported cases were: gender, age, use of psychoactive substances, including the use of alcohol and psychotropic drugs, time of work, specific diagnosis and case evolution.

Data collection occurred between January and February 2023, through the Sistema de Informação de Agravos de Notificação (SINAN) of the Departamento de Informática do Sistema Único de Saúde do Brasil (DATASUS), available at TabNet (<http://tabnet.datasus.gov.br/>). The system aims to group together data from notifications and investigations of diseases and illnesses of compulsory notification throughout the Brazilian territory.

Initially, the data collected in the SINAN platform were inserted in a database and tabulated. Subsequently, the relative and absolute frequencies of the variables were calculated, and graphs and tables were prepared. In addition, the proportional percentage variation (PPV) was calculated, to assess the difference in the number of cases between the corresponding year and the previous year, divided by the total of the previous year, multiplied by 100. Pearson's chi-square test was used to investigate the association of the variables studied. It was adopted $p < 0.05$ as statistically significant. Microsoft Excel 2013 and GraphPad Prism software

version 8.0.1 were used to analyze and interpret the data, which were expressed in graphs and tables.

Since this is a research conducted with secondary data, of free access, without the identification of the participants involved, it was not necessary to apply informed consent and it was not necessary to submit this study for consideration by a Research Ethics Committee (REC) involving human beings.

RESULTS

Chart 1 shows the evolution of reported cases of TMRT among nurses from 2018 to 2022 in Brazil. It was found that, among the years analyzed, there was an increase in the number of reported cases of TMRT in nurses, except in 2020, when there was a decline in the number of cases. In the year 2018 and 2022 the lowest (35) and the highest (69) number of notified cases were recorded, respectively. The PPV for the years investigated was: for 2019 (+54.29%), 2020 (-3.7%), 2021 (+15.38%) and 2022 (+15%).

Regarding the distribution of cases by regions of the country, it was observed that the Southeast region concentrated the highest percentage of notifications, with an increase in these notifications in all years. Soon after, the Northeast region was found, with the highest records of cases in 2018, 2020, 2021, surpassed only in 2019 and 2022 by the South region, as shown in Table 1.

Regarding the TMRT notifications in nurses according to age group, the highest number of cases was identified, in all the years

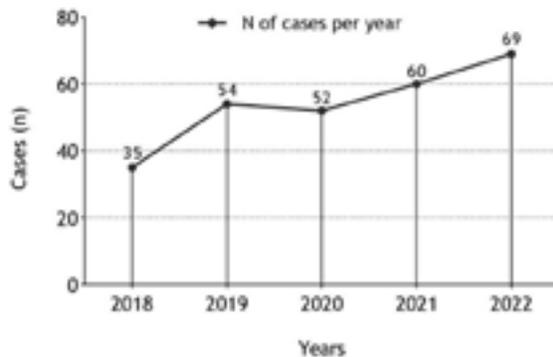
Table 1 - Total Notifications of Work-Related Mental Disorders among nurses according to the regions of Brazil, 2018 to 2022. Vitória, PE, Brazil, 2023.

Region of Brazil	Year									
	2018 (n)	%	2019 (n)	%	2020 (n)	%	2021 (n)	%	2022 (n)	%
North	1	2,8	3	5,5	4	7,7	4	6,6	6	8,7
Northeast	8	22,8	8	14,8	18	34,6	22	36,7	10	14,5
Southeast	17	48,6	19	35,2	21	40,4	24	40	33	47,8
South	3	8,6	17	31,5	3	5,7	3	5	13	18,8
Midwest	6	17,1	7	12,9	6	11,5	7	11,6	7	10,1
Total	35	100	54	100	52	100	60	100	693	100

Source: elaborated by the authors, 2023.

evaluated, in the 35 to 49 age group (59.6%), followed by the 20 to 34 age group (29.6%) (Graph 2)..

Graph 1 - Time trend of the evolution of reported cases of Work-Related Mental Disorder among nurses in Brazil, 2018 to 2022.



Source: elaborated by the authors, 2023.

Regarding gender, there was a higher proportion of TMRT cases among female nurses in all years analyzed.

As for the analysis of the association between the variables, no significant difference was observed in the distribution between genders. It was observed that there is a statistically significant association of the TMRT cases and the variables psychoactive substance use ($p < 0.01$) and psychotropic drugs ($p < 0.01$) (Table 2).

Table 2 - Characteristics of notifications of work-related mental disorder in nurses in Brazil, 2018 to 2022. Vitória, PE, Brazil, 2023.

Case Characteristics	2018 (n = 35)	2019 (n = 54)	2020 (n = 52)	2021 (n = 60)	2022 (n = 69)	Total (n = 270)	(%)	χ^2 (p-value)*
Gender								7,81
Female	29	48	46	59	64	246	91,1	(0,0985)
Male	6	6	6	1	5	24	8,9	
Alcohol Use								25,85
Yes	1	1	6	5	3	16	5,92	(<0,01)
No	24	29	28	33	59	173	64,0	
Ignored	10	24	18	22	7	81	30	
Use of psychoactive drugs								25,70
Yes	2	2	1	0	0	5	1,86	(<0,01)
No	21	28	33	38	61	181	67,0	
Ignored	12	24	18	22	8	84	31,1	
Use of psychotropic drugs								26,14
Yes	9	12	11	23	22	77	28,5	

As for the distribution of cases in relation to the length of time working/exposure in the occupational setting, 40% of the participants had years of practice, and no statistically significant association was identified (Table 2).

Regarding the specific mental disorder diagnosis, 46.6% of the cases were neurotic, stress-related, and somatoform disorders. It is noteworthy that, 18.15% of the notified cases did not have the information related to the code of the International Classification of Diseases (ICD-10) filled out (Table 2).

As for the evolution of cases, it was found that 48.15% evolved to partial disability, followed by ignored cases with 15.18% (Table 2).

DISCUSSION

From the results of this study, it was observed that the rates of TMRT in nurses increased according to the years analyzed, especially after the beginning of the COVID-19 pandemic, a period marked by significant impacts on the mental health of nursing professionals,¹² despite the underreporting that occurs of cases and information of TMRT.¹³

O estudo mostrou que a maioria dos enfermeiros com TMRT, eram mulheres, entre 35 a 49 anos, residentes em Estados da Região Sudeste do país e com mais de 13 anos de tempo de trabalho.

In Brazil, the evidence showed that there has been a reduction in absences related to occupational accidents and diseases, although the numbers of such events are still considered alarming.¹⁴ However, regarding the TMRT notifications, the findings are contrary, with a substantial increase over

No	14	17	25	19	40	115	42,6	
Ignored	12	25	16	18	7	78	28,9	
Working time/ exposure								24,21
Hours	2	6	7	4	9	28	10,3	
Days	3	2	0	1	3	9	3,33	
Months	4	4	4	14	11	37	13,7	
Years	13	17	21	27	30	108	40	
Ignored	13	25	20	14	16	88	32,6	
Diagnosis (CID-10)**								43,56
Mood disorders (affective)	7	9	9	11	9	45	16,6	(0,0307)
Neurotic, stress- related and somatoform disorders	16	27	29	22	31	125	46,3	
Mental disorder not otherwise specified	3	1	1	1	3	9	3,33	
Symptoms and signs concerning cognition, perception, emotional state and behavior	0	0	2	0	1	3	1,11	
Potential health risks related to socioeconomic and psychosocial circumstances	0	2	0	0	5	7	2,59	
Burnout Syndrome	0	1	4	12	8	25	9,26	
Other CID's	1	0	2	2	2	7	2,59	
CID Not filled in	8	14	5	12	10	49	18,15	
Case Evolution								33,61
Healing	3	8	2	2	5	20	7,41	(0,0919)
Unconfirmed Cure	1	4	4	14	7	30	11,1	

Temporary disability	22	22	28	25	33	130	48,1
Permanent partial disability	2	3	3	2	1	11	4,07
Permanent total disability	0	1	0	0	0	1	0,37

Source: prepared by the authors, 2023. *Pearson chi-square test; **International Statistical Classification of Diseases and Health Problems.

the years in the country.¹⁵ Similarly, this study showed that there was an increase in TMRT notifications in Brazilian nurses in the last five years.

When we observed the findings of the cases reported according to the regions of the country, we observed that the Southeast region was the leader in the notifications, a fact that may be related to the population density of the region and the working conditions faced by nurses in the states of this region, especially during the pandemic of COVID-19, so that factors such as the high workload, violence experienced at work and the lack of psychological support were associated with the increase of psychopathological symptoms among nursing professionals.¹⁶

Regarding the age bracket, the highest rates of involvement were observed in the 35 to 49 age bracket. This is similar to what was observed in another study, which showed the highest rates of TMRT patients in the 30 to 49 age group.¹⁷ This result can be explained by the fact that most of the nursing workforce in Brazil and in the world is relatively young, with ages around 35 years.¹⁸

Regarding the gender more affected by TMRT, the results found in the literature were divergent.^{17,19,20} The study demonstrated the largest portion of notifications of cases in females, a fact possibly related to the nursing profession still composed mostly of women, constituting approximately 85% of the category.^{21,22}

Still with regard to gender, a cross-sectional study conducted in 2020 showed that female health professionals were the most affected during the pandemic of COVID-19, a fact that can be explained by both work overload and the overload of domestic activities. These findings indicated that the greater exhaustion in these women seems to generate a greater mental overload and increased susceptibility to mental illness.¹⁷

Regarding the time of work/exposure of these professionals, it stood out in 40% of the sample, years of work performance, demonstrating a possible relationship between the longer time of work and the development of TMRT. This relationship is already highlighted in the literature, where in addition to physical, chemical, ergonomic, psychosocial and/or biological risks arising from work performance, nursing professionals suffer considerable devaluation, being exposed to unhealthy working conditions and long working hours, which causes physical and emotional exhaustion of the category, which can lead to direct impacts on the health of this worker and, consequently, on the quality of care provided.²³⁻²⁵

Among the specific diagnoses most frequently observed in the sample of this study, neurotic disorders, related to stress, and somatoform disorders, followed by mood disorders, stood out. Neurotic, stress-related, and somatoform disorders are a group of disorders characterized by anxiety triggered exclusively or essentially by clearly determined situations that currently do not present any real danger.²⁶ These findings diverged from a previous study conducted in Rio Grande do Sul, in which mood disorders were the most identified diagnosis, followed by neurotic, stress-related, and somatoform disorders, in a sample of 375 nurses on leave for health treatment.²⁷

Also regarding the specific diagnoses, it was observed that in 18.15% of the reported cases, information related to ICD-10 was not filled in, which is a limiting factor to know the exact profile of TMRT diagnoses in nurses.

Regarding the evolution of cases, almost half of the sample (48.15%) evolved to temporary disability, which is characterized by the need for absence from work activities for a period exceeding 15 days.²⁸ A study conducted in a city in the state of Minas Gerais showed similar results, in which 80.6% of the sample evolved to temporary disability.²⁹

This study had limitations, mainly those related to SINAN, and one can emphasize the underreporting of cases and the incomplete filling out of information by the professionals responsible. Moreover, the large number of "ignored" data may serve as a factor for compromising the quality of the information collected and presented, which makes it difficult to establish a reliable profile of the cases.

However, it is noteworthy that this study was the first research to investigate the notified cases of TMRT, specific in nurses, in Brazil. Therefore, we conclude that it presents evidence that has not been previously explored, and that is of great relevance to public health, since the information presented can serve to support the development of strategies aimed at improving the health of nurse workers and thus mitigate the risks of mental illness in this category, which faces strong devaluation and high workloads. In addition, it instigates and reinforces the need to discuss the importance of considering the work environment and the aspects related to professional performance as a risk factor for mental illness.

CONCLUSION

CCThe results of this study allowed us to outline the main characteristics related to TMRT in nurses in Brazil between the

years 2018 to 2022, so that a higher number of cases was observed among females, in the age range of 35 to 49 years, mainly those residing in states of the Southeast region of the country and who had more than 13 years of working time. The most diagnosed TMRT was neurotic, stress-related and somatoform disorders, and temporary disability was the main evolution observed in the cases.

Moreover, an increase in the number of TMRT notifications was seen during the period analyzed, which demonstrates the importance of implementing and strengthening strategies aimed at promoting and monitoring the health of nursing workers, with emphasis on aspects related to mental health.

In addition, we highlight the need to improve the quality of data filling by health professionals in the SINAN, since much information was ignored during the filling.

As suggestions for future studies, it is important to conduct studies with the inclusion of other professionals who belong to the nursing team, such as nursing technicians and assistants, which were not the focus of this study.

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