Cogitare Enfermagem

ORIGINAL ARTICLE

WORK LEAVES DUE TO MOOD DISORDERS BETWEEN 2018 AND 2020 IN PIAUÍ

HIGHLIGHTS

1. Mental and behavioral disorders are causes of work leave.
2. There was a predominance of work absences due to depressive episodes.
3. The social security sickness benefit was granted in most absences.

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ABSTRACT

Objective: To analyze work absences due to mood disorders between 2018 and 2020 in Piauí. **Method**: Census study, descriptive-analytical, carried out in Piauí, Brazil, between May and July 2021. Data was collected from the National Social Security Institute's database. Analyzed with descriptive and inferential statistics. **Results**: 1,717 leaves were identified, 65.3% were female workers with an average age of 39.78 years, 91% had an income of one to two minimum wages, 42.7% came from other municipalities, and 82.2% worked in the urban area. Among the absences, 52% were due to depressive episodes, and 84.2% of the workers were granted social security sickness benefits. There was a statistical association between the municipality of origin, the zone of labor activities, and the average duration of work leave. **Conclusion**: The study contributed to the identification of absences and the provision of data that collaborate in the formulation of intervention strategies and the worker's best working conditions and mental health.

KEYWORDS: Epidemiology; Mental Health; Mood Disorders; Social Security; Employee Health.

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INTRODUCTION

The work pace nowadays is influenced by new management and organization models, with constant changes and pressures in the performance of professionals[1]. The work environment can also be marked by situations of violence, such as physical and psychological work analogous to slavery, moral harassment, and bullying. These factors, together, contribute to the development of Mental and Behavioral Disorders (MBD) or may aggravate pre-existing symptoms[2].

The literature indicates that MBDs are disabling and are among the main causes of reduced productivity and lost workdays. They are related to absenteeism or work leave, which is the worker's absence from their workplace, characterized by delays, absences, and missed hours during the designated work schedule[3-5].

Among the most common MBDs in this population group are mood disorders such as depression, dysthymia, bipolar disorder, and hypomania, which imply clinical changes that can compromise thinking, mood, and human behavior, with modification of the overall level of activity; most of them being recurrent and often associated with stressful situations[6].

Disorders such as depression, anxiety, and dysthymia affect, respectively, 298, 273, and 106 million people within the world population. In more severe cases, in addition to incapacity, they can lead to self-destructive behaviors, such as suicide. The consequences of these disorders can affect other areas of life, as they are a frequent cause of medical consultations, hospitalizations, and work absences[7-9].

A cross-sectional census study conducted in 2017, with data from 2015 and 2016 identified 2,449 workers on leave, with mood disorders being the main cause of the first and second leave[6]. Still, according to Social Security data in 2017, depressive episodes generated 43.3 thousand sick leaves, occupying the 10th position of diagnoses related to work absences. Already, the diseases classified as other anxiety disorders were also among those that were most removed, in the 15th position, with 28.9 thousand cases[10]. Affective problems cause a significant increase in absenteeism.

An in-depth reflection on work absences due to mood disorders is considered necessary as it allows a range of possibilities in identifying related factors and expanding knowledge about the influence of work on the health and well-being of workers in Piauí. Therefore, this study aimed to analyze work absences due to mood disorders between 2018 and 2020 in Piauí.

METHOD

This is a census, descriptive-analytical study with a quantitative approach, part of the research macro project entitled "Work absences due to mental and behavioral disorders: analysis of the temporal trend." The research was conducted based on data related to absences due to mood and mental disorders available in the National Institute of Social Security (INSS) database between the years 2018 and 2020.

Data collection took place from May to July 2021. To this end, a form prepared by the authors was used, presenting the variables corresponding to the worker's sociodemographic

profile (gender, age, and municipality of origin), economic (income), occupational (activity performed in the urban or rural area), and leave (quantity, year, duration, and cause).

Data on medical leave for workers under the legal regime of the Consolidation of Labor Laws (CLT) who were over 18 years old and diagnosed with mood disorders, F30 to F39, according to the International Classification of Diseases (ICD-10), as a cause of work absence in the period from 2018 to 2020 were included. The exclusion criteria were the absence of workers with incomplete data on the analyzed variables.

Initially, the IT department management requested statistical data from the INSS database and passed on to the researchers in the form of a spreadsheet in Microsoft Excel®. Next, filtering was carried out, considering the established inclusion and exclusion criteria.

The data was transferred to the forms and double-tabulated in Microsoft Excel®, processed in IBM Statistical Package for the Social Sciences (SPSS), version 22. The research variables ' descriptive analyses (frequencies, measures of central tendency, and dispersion) were performed. Pearson's chi-square test was chosen, and Fisher's exact test was used when its assumptions were violated. The significance level was maintained at $p \leq 0.05$, and the confidence interval was 95%.

The research received authorization from the Executive Management of INSS in the state of Piauí and approval by the Research Ethics Committee of the Universidade Federal do Piauí (UFPI) through opinion number 2.445.830.

RESULTS

One thousand seven hundred seventeen workers were identified, of which 1,122 (65.3%) were female, with an average age of 39.78 years, 1,562 (91%) received between one and two Minimum Wages (MW), 734 (42.7%) were from other municipalities in Piauí, and 1,411 (82.2%) worked in the urban area (Table 1).

Table 1 – Sociodemographic, economic, and occupational characterization of leaves due to mood disorders in workers from the state of Piauí. Teresina (PI), Brazil, 2018-2020.

Variables	n	%	CI[†]95%	Mean±SD[‡]
Sex				
Male	595	34.7	(32.4-36.9)	
Female	1,122	65.3	(63.1-67.6)	
Age				39.78±11.07
Income (MW[§])				
1-2	1,562	91	(89.5-92.3)	
2-3	69	4	(3.2-5.0)	
3-4	38	2.2	(1.6-3.0)	
4-5	35	2	(1.4-2.8)	
5-6	13	0.8	(0.4-1.3)	

Municipality of origin			
Teresina	722	42.1	(39.7-44.4)
Other municipalities of Piauí	734	42.7	(40.4-45.1)
Other municipalities of Brazil	261	15.2	(13.6-17.0)
Zone			
Urban	1.411	82.2	(80.3-83.9)
Rural	306	17.8	(16.1-19.7)

†CI= Confidence Interval; ‡SD= Standard Deviation; §MW= Minimum Wages.
Source: Data collected by the authors (2023).

As for the characterization of work absences, 1,441 (83.9%) had a single absence, with an average duration of 102.64 days. The ICD F32 (Depressive Episodes) corresponded to 892 (52%) of the leave diagnoses. Regarding the number of recurrent leaves, there were two leaves, 195 (70.7%). Regarding the average number of days of leave, this was more significant in the 1st leave (92.72±74.23 days). The average total number of days off was 181.87±113.15 days. The year 2019 stood out, with 574 (39.8%) of the benefits granted. As for the type of benefit, 1,211 (84.2%) were sickness benefits (Table 2).

Table 2 – Characterization of work absences due to mood disorders and benefits granted to workers in Piauí. Teresina (PI), Brazil, 2018-2020.

	n	%	CI†-95%	Mean±SD‡
More than one removal				
Yes	276	16.1	(14.4-17.9)	
No	1.441	83.9	(82.1-85.6)	
Time away in days (single)				102.64±99.56
Year of benefit grant				
2018	497	34.5	(32.1-37.0)	
2019	574	39.8	(37.3-42.4)	
2020	370	25.7	(23.5-28.0)	
Type of benefit				
Social Security sickness benefit	1,211	84.2	(82.2-86.0)	
Accident sickness benefit	59	4.1	(3.2-5.2)	
Disability retirement	70	4.9	(3.8-6.1)	
Social support for people with disabilities	99	6.9	(5.7-8.3)	
Cause of removal (ICD§-10)				
F30	2	0.1	(0.0-0.4)	
F30.2	2	0.1	(0.0-0.4)	
F31	141	9.8	(8.3-11.4)	
F31.1	37	2.6	(1.8-3.5)	
F31.2	96	6.7	(5.5-8.0)	
F31.3	29	2.0	(1.4-2.8)	

|			
F31.4	63	4.4	(3.3-5.8)
F31.5	55	3.8	(2.9-4.9)
F31.6	41	2.8	(2.1-3.8)
F31.7	24	1.7	(1.1-2.4)
F31.8	12	0.8	(0.5-1.4)
F31.9	18	1.3	(0.8-1.9)
F32	280	19.5	(17.5-21.6)
F32.0	13	0.9	(0.5-1.5)
F32.1	187	13	(11.3-14.8)
F32.2	262	18.2	(16.3-20.3)
F32.3	130	9	(7.6-10.6)
F32.8	9	0.6	(0.3-1.1)
F32.9	11	0.8	(0.4-1.3)
F34	2	0.1	(0.0-0.4)
F34.0	3	0.2	(0.1-0.6)
F34.1	7	0.5	(0.2-1.0)
F34.8	4	0.3	(0.1-0.7)
F38	2	0.1	(0.0-0.4)
F38.0	1	0.1	(0.0-0.3)
F38.1	2	0.1	(0.0-0.4)
F39	6	0.4	(0.2-0.9)
Number of leaves			
2	195	70.7	(65.1-75.8)
3	51	18.5	(14.2-23.4)
4	13	4.7	(2.7-7.7)
> 4	17	6.2	(3.8-9.5)
Order and average days on leave			
1st			92.72±74.23
2nd			72.53±62.48
3rd			47.79±34.24
4th			35.17±17.77
5th			39.94±21.51
6th			41.71±15.64
7th			24.00±18.99
8th			42.67±19.22
9th			48.00±4.24
10th			22.00±
Total days away			181.87±113.15

[†]CI= Confidence Interval; [‡]SD= Standard Deviation; [§]ICD=International Classification of Diseases and Related Health Problems.
Source: Data collected by the authors (2023).

Regarding recurrent work absences, the number of benefit grants was higher for those who took leave once in 2019 (n=127), followed by those workers who took leave once in 2018 (n=96). In 2020, there was a sharp reduction in the number of benefit grants, mainly

from the fifth to the eighth leave, among which only two workers experienced work leave (Graph 1).

Graph 01 – Characterization of the distribution of the number of benefits granted due to recurrent work leave of workers from Piauí. Teresina (PI), Brazil, 2018-2020.
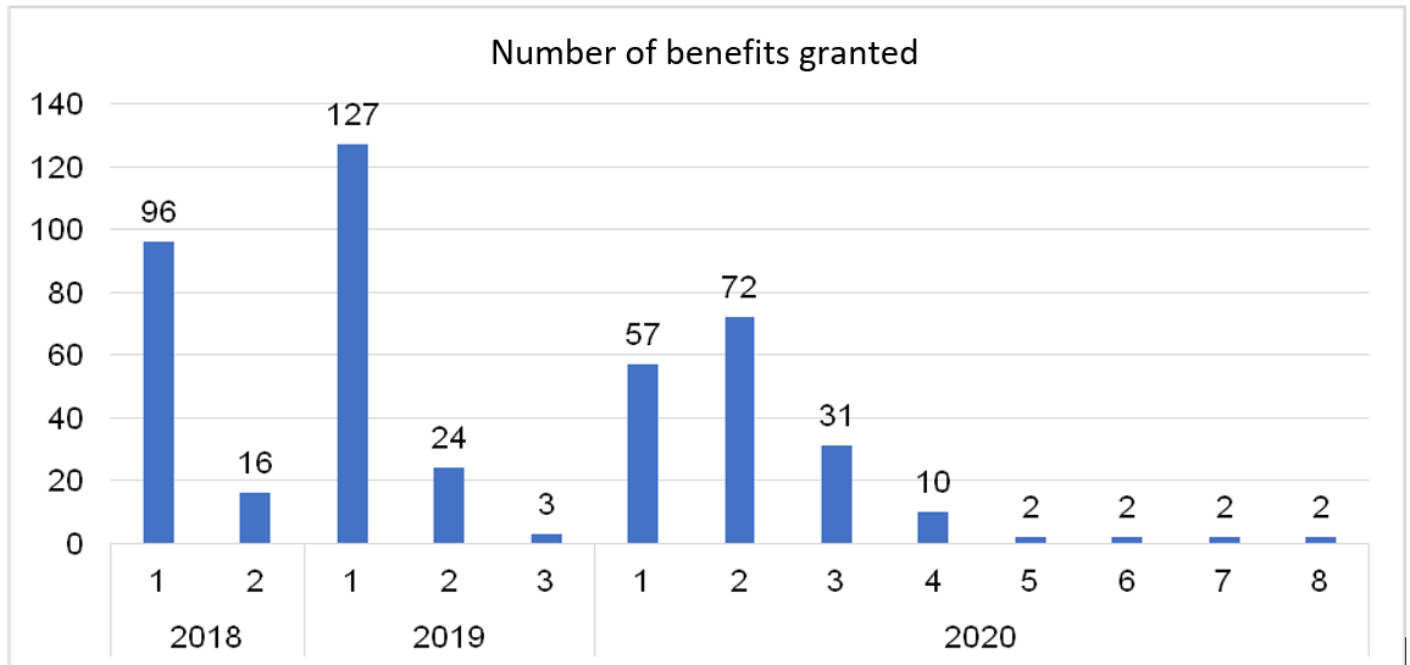
Source: Elaborated by the authors (2023).

The variables corresponding to the sociodemographic, economic, and occupational profile were associated with the average duration of work leave. There was a statistically significant association between the municipality of origin and the zone where the work activities were carried out (Table 3).

Table 3 – Analysis of the association between sociodemographic, economic, and occupational profile and the duration of work absences due to mood disorders among workers in Piauí. Teresina (PI), Brazil, 2018-2020.

	Leave time				
	≤102 days		102 days		
	n	%	n	%	p-value
Sex					0.126
Male	267	21	179	14.1	
Female	531	41.7	296	23.3	
Income (MW†)					0.406
1-2	722	56.7	423	33.2	
2-3	29	2.3	28	2.2	
3-4	22	1.7	10	0.8	
4-5	18	1.4	10	0.8	

5-6	7	0.5	4	0.3	
Municipality of origin					**0.001**
Teresina	341	26.8	192	15.1
Other municipalities of Piauí	294	23.1	219	17.2
Other municipalities of Brazil	163	12.8	64	5
Branch					**0.002**
Urban	668	52.5	364	28.6
Rural	130	10.2	111	8.7

†SM= Minimum Wages.

Source: Data collected by the authors (2023).

DISCUSSION

Work leave is influenced by several factors, ranging from institutional to personal, including mental health. Identifying factors related to work leave is fundamental for developing public policies aimed at workers' health. Thus, mental health presents itself as an important field for research in the area[11-12].

Work leave presents particularities that vary according to gender. In this study, a higher prevalence of leave was observed among females. This finding corroborates a study conducted in 2019, in Santa Catarina, in which a population of 45,388 effective and active state public servants was evaluated between 2010 and 2013, showing that the highest prevalence of leave occurred among female workers[13].

The entry of women into the labor market was accompanied by historically "feminine responsibilities" related to family reproduction, education, and domestic care. This scenario of multiple journeys can affect women's mental health, making them vulnerable to negative emotional states and the development of mental health changes[14-15].

The age group of workers removed due to mood disorders in this research was similar to that found in a survey conducted in previous years, with a higher incidence and removal observed among participants aged 31 to 40 years. The findings emphasize that individuals in the economically active phase are experiencing mental suffering, which impacts the country's economy, considering the economic and social losses generated by the withdrawal of the population from this age group[16-17].

Another important variable for work leave was income. The data resembles another survey, in which a greater number of benefits from accident-related sick leave was found among workers who earn up to one minimum wage and workers who earn up to two minimum wages. The worker's wage income directly impacts their quality of life, which also affects their health. In this way, workers with higher salaries have better housing, leisure, education, health access, food, etc. When deficient, these aspects can contribute to the worker's illness[13-18].

There was a predominance of workers performing their activities in urban areas. Urban workers showed a greater tendency to take time off work compared to those working in a rural environment[8-9]. A multicenter study conducted in the cities of São Paulo, Rio de Janeiro, Porto Alegre, and Fortaleza, which analyzed the proportion of MBD prevalence among Primary Care users and its association with sociodemographic factors, demonstrated

high rates of MBD in urban areas that are associated with widespread urban violence and adverse socioeconomic conditions, as well as pollution, high noise levels, and lack of recreational areas in Brazilian cities[19].

The leave time was considered long, pointing to the relationship with the disabling symptoms present in depressive conditions, which indicates the need for a significant period for the worker's improvement and recovery. However, in Spain, an investigation identified a longer time of absence due to MBD among workers, who had an average of 147.7 days of sick leave, with those diagnosed with depression having a longer absence time[20].

The distribution of benefits granted over the studied years showed an increase in recurrent leaves, suggesting a higher risk of the worker having a new episode of illness and thus needing to be absent again in the future. The findings showed that, although the number of people with more than one leave has decreased over the years, those who are taking leave are doing so systematically.

The results for 2020, a pandemic year, indicate that there was a reduction in the total number of absences; however, there was an increase in the frequency of these absences. It is important to highlight that the COVID-19 pandemic has caused significant changes in work environments and in various areas of people's lives, contributing to the increase of MBD[21-22]. A study conducted with Nursing professionals during the pandemic identified a significant percentage of depression cases and work absences among the participants[23].

In this sense, it is necessary to assist the worker in understanding the factors that contributed to their illness and thus invest in preventive measures. These actions aim to reduce the emotional, social, institutional, and economic damage caused, providing a healthier and more productive work environment[13,24].

When proceeding with the characterization of benefits as a cause of workers' leave, a predominance of single leave was identified. As for the type of leave, the social security sickness benefit was the most granted. This aid is a way to replace the salary that the insured receives for their work when they cannot perform their work activities either totally or temporarily. Additionally, it appears with a higher percentage when compared to other benefits granted for single leave in the literature[6-8].

Although cases of disability retirement related to the absences investigated in the research were not evaluated, a study conducted with French workers identified that 529 workers retired after the previous medical leave period. It is suggested that sick leave should be considered a risk related to future retirement, especially considering cases of mental disorders[25].

Regarding the number of people who took leave according to ICD, depressive episodes (F32) were specified as the most frequent ICD with a significant percentage, followed by severe depressive episodes without psychotic symptoms (F32.2), moderate depressive episodes (F32.1), bipolar affective disorder (F31), and severe depressive episode with psychotic symptoms (32.3). The results found in this investigation corroborate with other evidence available in the literature, reinforcing the importance of greater attention to such diagnoses[11-21].

A study identified mood disorders as the main cause of work absences in the period 2015-2016[6]. Similarly, a survey conducted with workers on leave due to mental health issues identified a significant prevalence of leaves due to mood disorders[26]. This highlights

the need to implement actions to prevent and promote mental health in the workplace, highlighting the importance of work in individuals' lives and the time dedicated to it.

Investigate the mental disorders that affect workers and impact not only their personal lives but also their performance and their relationship with work has been the subject of study in different segments. A survey conducted with permanent employees of the Universidade Federal de Ouro Preto to analyze the prevalence of work-related MBD leave from 2011 to 2019 revealed a growing trend in absenteeism due to these diagnoses among employees, being the main cause of medical leave in the institution. Among the reasons for absenteeism, depressive episodes (F32) and recurrent depressive disorder (F33)[27] were identified.

Another study focused on the work leave of teachers due to illness in the municipality of Rio Grande do Sul. The majority of participants were diagnosed with mild depressive disorders (F32.0), with 11 occurrences. There were also nine cases of severe depressive episodes, without psychotic symptoms (F32.2), representing 24% of the diseases in the mental health group. Secondly, the pathologies of bipolar affective disorder (F31.0) and unspecified bipolar affective disorder (F32.9) accounted for 12% of the group's episodes. The diagnoses of generalized anxiety (F41.1), acute stress reaction (F43.0), and adjustment disorder (F43.2) follow in frequency, each with five occurrences, totaling 18% of the group[28].

International reach surveys indicate that mood disorders, notably depression and anxiety, are identified as the main agents responsible for absenteeism in the workplace. Furthermore, these disorders are the main contributors to the most significant costs in health systems compared to other mental health conditions[29-30].

Depression is a mood disorder with a growing prevalence, with the potential to reduce professional productivity by up to 10% over a lifetime, therefore, it has a significant impact on absenteeism, as it contributes to prolonged periods of disability[4]. According to a report by the World Health Organization (WHO), released in 2022, new cases of depression increased by 25% among the population. In Latin America, Brazil is the country with the highest prevalence of depression, in addition to being the second country with the highest prevalence in the Americas[31].

Fragile labor relations can be one of the contributing factors to the development of depressive disorders. Aspects such as lack of professional recognition and professional burnout significantly increase the risk of mental suffering[32].

Bipolar affective disorder, which in this study appears as the second cause of work absences, right after depressive episodes and their subgroups, is a chronic, complex disease with high rates of morbidity and mortality worldwide. This disorder is estimated to affect about 2.4% of the world's population. The most alarming thing is that around 15% to 19% of individuals with bipolar affective disorder commit suicide[33].

A statistically significant association was observed between the municipality of origin and the zone where labor activities were carried out. Studies conducted with workers on leave due to depression and anxiety, respectively, in the state of Piauí[8-9] also found an association of the urban area variable.

The urban worker is impacted by the fast pace of cities, facing a greater expenditure of time for transportation due to traffic jams and exposure to environmental and noise pollution, among other challenges. These factors add up to the relationships experienced in the work environment, which can contribute to the physical and mental wear and tear of professionals[34].

This study has limitations, as the data used were secondary, which may affect the quality of the results. Furthermore, the adopted cross-sectional design makes it impossible to verify the worker's previous health status, since the measures of interest are taken simultaneously, which makes it difficult to establish cause-effect relationships. Finally, it is important to emphasize that studies on this topic are still in their early stages, especially in Brazil.

CONCLUSION

The findings of this study indicated that, among the workers on leave, the majority were female, with an average age of 39.78 years, with income ranging from one to two minimum wages, coming from other municipalities in the state, working in the urban area, and who took leave only once. The Social Security sickness benefit was the benefit granted to most workers on leave, and the main diagnosis related to the leave was a depressive episode. The variables municipality of origin and zone where work activities were carried out were statistically associated with the average duration of work leave.

From the collected data, it is inferred that MBD, like depression, may be related to working conditions and, consequently, worker illness, which results in a significant number of work absences. Identifying risk factors and recognizing this relationship contribute to planning interventions promoting mental and occupational health.

It should be emphasized that we must reflect on the high social security costs and other economic impacts associated with work leave, especially as it involves workers of economically active age.

In the meantime, the need for new studies related to the theme is highlighted, with methodological approaches of a higher level of evidence that allow for a deeper understanding of the relationship between MBD and work absences.

ACKNOWLEDGMENTS

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