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RESEARCH

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# Prevalência de transtornos mentais comuns entre trabalhadores marítimos do Rio de Janeiro

Common mental disorders prevalence among maritime workers of Rio de Janeiro

Prevalencia de trastornos mentales comunes en trabajadores marítimos de Rio de Janeiro

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## **ABSTRACT**

**Objective:** To describe the prevalence of common mental disorders among seafarers. **Methods:** Cross-sectional study with 316 employees in a water transport company. Research was approved by the Ethics Committee in Research under number CAAE 0271.0.258.258-11, data collection was conducted in 2012. The variable common mental disorder was investigated according to the Self Reporting Questionnaire. **Results:** It was found 14.24% of prevalence. It was noted that the depressed and anxious mood symptoms group was the most significant. Female gender, family income below average, high weekly working hours, self-reported stress, thinking of abandoning job, category machinery sailor, sedentary lifestyle and not smoking were associated with common mental disorder. **Conclusion:** The creation of occupational consistent projects is necessary, with multidisciplinary teams, in order to promote health and quality of life in the workplace and mental disorders reduction.

Descriptors: Mental Disorders, Professional Burnout, Occupational Health, Occupational Health Nursing.

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#### **RESUMO**

Objetivo: Descrever a prevalência de transfornos mentais comuns entre trabalhadores marítimos. Métodos: Trata-se de estudo transversal realizado com 316 funcionários de empresa de transporte hidroviário. A pesquisa foi aprovada no CEP sob o CAAE 0271.0.258.258-11 e a coleta dos dados foi realizada em 2012. A variável transtorno mental comum foi investigada de acordo com o Self Reporting Questionnaire. Resultados: Constatou-se a prevalência geral de 14,24%. Notou-se que o grupo de sintomas humor depressivo e ansioso foi o mais expressivo. Sexo feminino, renda familiar abaixo da média, alta carga horária semanal, estresse autorreferido, pensamento de abandono do emprego, pertencer à categoria marinheiro de máquinas, sedentarismo e não tabagismo mostraram-se associados ao desfecho. Conclusão: É necessária a criação de projetos ocupacionais consistentes, com equipes multidisciplinares, tendo em vista a promoção da saúde e qualidade de vida no ambiente de trabalho e a redução de transtornos mentais. Descritores: Transtornos Mentais, Esgotamento Profissional, Saúde do Trabalhador, Enfermagem do Trabalho.

#### **RESUMEN**

Objetivo: Describir la prevalencia de trastornos mentales comunes entre la gente del mar. Métodos: Estudio transversal de 316 empleados de la empresa de transporte marítimo. La investigación fue aprobado en el comité de ética en pesquisa, bajo el número de CAAE 0271.0.258.258-11, la recogida de datos se llevó a cabo en 2012. El trastorno mental común variable se investiga según Self Reporting Questionnaire. Resultados: se encontró prevalencia global de 14,24%. Se observó que el grupo de los síntomas del estado de ánimo depresivos y de ansiedad fue el más significativo. Mujer, ingresos familiares por debajo de la media, altas horas de trabajo semanales, el estrés autoinformado, el pensamiento de abandonar el trabajo, la categoría de marinero de la maquinaria, el estilo de vida sedentario y no fumar se asociaron con los trastornos mentales. Conclusión: Se requiere la creación de proyectos ocupacionales consistentes, con equipos multidisciplinarios, con el fin de promover la salud y calidad de vida en el lugar de trabajo y la reducción de los trastornos mentales. Descriptores: Trastornos Mentales, Agotamiento Profesional, Salud Laboral, Enfermería del Trabajo

## INTRODUCTION

Work is an essential part of human life, as it constitutes a mean of production for society, and profitability for the individual who practices it. In work, men seek not only attendance to their needs of sustenance, but also personal valorization and satisfaction. In today's society, the great demand of dedicated workers, along with personal life, brings several harms. The worker often needs a psychic readaptation to deal with such an emotional load, which exceeds his/her real capacity, triggering mental disorders.<sup>1</sup>

Millions of people suffer from any form of mental illness in the world, and its incidence is increasing progressively each year.<sup>2</sup> In Brazil, authors have revealed a high prevalence of these mental disorders in different studied populations.<sup>3,4</sup> The workers population is the most affected by this problem, since minor mental disorders affects about 30% of employed workers, and serious mental disorders, about 5 to 10%.<sup>5</sup>

Common Mental Disorder (CMD) was an expression created for anxiety, depression or somatoform symptoms,<sup>6</sup> which is currently found in the adult population, but little diagnosed in the health services.<sup>2,3</sup> Records of work-related diseases increased from 5,025 in 1988 to 30,334 in 2005 among workers in the general social security scheme.<sup>7</sup>

Among the studies carried out with workers (teachers, rural workers, nurses, community agents, drivers and collectors), high prevalences of CMD were found. Many citing the work routine, demand, control, work process and environmental conditions associated with the onset of these disorders.<sup>4</sup>

When it comes to workers in the waterway, research is few and far between for work safety, hazardous conditions, work accidents and sleep deprivation. Little material was found about work organization taking into account the family context and interpersonal relationships at work.<sup>8</sup>

This article aims to describe the prevalence of CMD among seaborne workers in Rio de Janeiro.

#### **METHODS**

The present study has a descriptive exploratory character of sectional type. The population studied was workers from a waterway transportation company located in the state of Rio de Janeiro, Brazil.

The instrument used was self-administered structured questionnaire with characteristics referring to sociodemographic aspects, life habits and MCT. A scale adapted to Portuguese was used, based on the summary version of the Self Reporting Questionnaire (SRQ-20). The instrument was developed to identify common psychic disorders in primary care services in developing countries. The SRQ-20 was validated with sensitivity and specificity around 80%. 10,11

The SRQ-20 is subdivided into four dimensions, namely: energy reduction; somatic symptoms; depressive/anxious mood; depressive thoughts. <sup>10,11</sup> According to the validation of the SRQ-20's brazilian version, the instrument scores can define as suspicious those with a score equal to or above six. <sup>12</sup>

Firstly, a univariate analysis was performed with the purpose of describing the sociodemographic, labor and life habits of the population in question. In bivariate analyzes, suspicion of CMD was analyzed together with sociodemographic, labor and life habits variables. The chisquare test ( $x^2$ ) was used to verify differences between the analyzed groups. The value  $p \le 0.05$  was considered in the statistical significance assessment, where the values below this level were described, then binary logistic regression was performed for dependent variables and odds ratios were described with respective confidence intervals of 95%. The steps in the data analysis process were performed using Microsoft Office Excel 2003° programs, and Statistical Package for the Social Sciences version  $21^{\circ}$ .

The research was approved by the Ethics Committee of the University Hospital Antônio Pedro of the Federal University of Fluminense (UFF) under number 260/11 and CAAE 0271.0.258.258-11 and the data collection was developed during the year 2012.

## **RESULTS**

The studied population was predominantly male (78.5%). The mean age found was 35 years, with a standard deviation of 13.6 years, the majority being up to 35 years. Regarding skin color, 50% were mestizos - category recoded from: yellow, brown and indigenous - 35.8% white and 14.2% black. Regarding the marital situation, 55.4% of the population had a partner. Regarding children, 57.3% of the interviewees did not have them. Regarding family income, in minimum salaries (MS), at the time of the interview (R\$ 622.00), 50.3% received maturities up to 5 MS. In terms of schooling, only 20.6% remained above the average found (high school).

As for the professional category, the deck mariner clearly shows the highest percentage of workers, with 44.9%. The existing sectors that make up the total number of people studied were divided into two groups: maritime (81%) and station (19%).

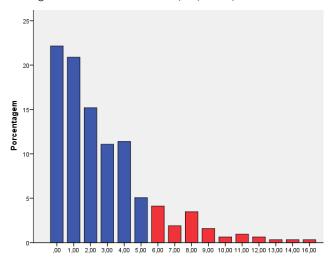
As to the type of work contract, 97.5% were part of the permanent staff of the institution. The average time of work in the company was 5 years, with a standard deviation of 8.3 years. Most of the workers (69.6%) worked in the institution for less than five years.

Regarding the weekly workload, 84.2% fulfilled 36 hours, which is also the average hours worked, with a standard deviation of 3.6 hours. One can also analyze that in the work shift, 52.8% work in the morning shift and 47.2% in the afternoon. Regarding the idea of leaving the job, 85.8% said they did not think about this possibility. In the variable think of work during breaks, 55.7% of the workers answered yes.

In the analysis of the habits of life: the practice of physical exercises regularly was 44.3%, against 55.7% of sedentary ones; Regarding tobacco use, 30.4% used it frequently; And 41.1% were alcoholic.

Regarding the degree of self-reported stress, 68.4% of respondents said they did not have stress, while only 31.6% reported stress. The overall prevalence of CMD among workers was 14.24% (Figure 1).

**Figure 1 -** Distribution of the score for the prevalence of CMD among maritime workers. Niterói, RJ, Brazil, 2012



According to the distribution of the prevalence of CMD among workers, it was noted that the group of depressive and anxious mood symptoms was the most expressive with a higher prevalence among those who cried more than usual (14.5%). Next came the somatic symptoms group with the highest prevalence among those who slept poorly (10.1%).

Among the group of decreased vital energy, the highest prevalence was among workers who tire easily. The group of depressive thoughts symptoms presented little expressive values.

The variables female gender (29.41%, p < 0001) and mean family income less than 5 SM (18.24, p = 0.029) when analyzed showed an association with CMD.

With respect to labor variables, in the professional category, seamen (19.71%, p=0.037) presented statistical significance for CMDs when compared to other professional categories. The p value was significant in the workload greater than 36 hours (26.00%, p=0.010) when compared to those who work less. As for the variable "to think about leaving the job" (31.57%), the value of the chi-square test was p=0001, demonstrating a strong association with CMD.

CMD was associated with sedentary lifestyle (20.45%, p < 0.0001) and no smoking (87.73%, p = 0.037). Regarding the degree of self-reported stress, those who considered themselves stressed had more expressive prevalence.

**Table 1 -** Significant socio-demographic variables, labor, life habits and prevalence of CMD among maritime workers. Niterói, RJ, Brazil, 2012

VARIABLES	N	n	%	Value of p
Sex				<0,0001
Female	068	20	29,41	
Male	248	25	10,08	
Average family income				0,029
Up to 5 minimum wages	159	29	18,24	
Over 5 minimum wages	157	16	10,19	
Professional Category				0,037
Deck Sailor	142	10	11,11	
Sailor of machines	084	28	19,71	
Commander	090	07	08,33	
Average weekly hours			DP = 3,6	0,010
Up to 36 hours	266	32	12,03	
Over 36 hours	050	13	26,00	
Thought about quitting the job				0,001
Yes	038	12	31,57	
No	278	33	11,87	
Degree of self- reported stress				<0,0001
No stress	216	03	01,38	
Stressed	100	42	42,00	
Exercises regularly				<0,0001
Yes	140	009	06,42	
No	176	036	20,45	
Smoker				0,037
Yes	096	018	18,75	
No	220	193	87,73	

N = total in the extract. N = number of suspected workers.

After binary logistic regression, about seven times more chances for the development of CMD were observed among those who reported being stressed (OR = 6.81, IC95% = 2.35-19.68) four times for those who think about quitting their jobs (OR = 4.34, IC95% = 1.72-10.96), three times among the sedentary (OR = 2.99, IC95% = 1.22-7.30) and finally, two and a half times, among low-income workers (OR = 2.51, IC95% = 1.15-5.44).

## DISCUSSION

The overall prevalence of CMD was 14.28%. Relatively low percentage when compared to other studies. In a sectional study carried out with nursing workers from a federal hospital, located in the city of Rio de Janeiro, the prevalence was 23.6%.<sup>13</sup>

It was found higher frequency in the group of vital energy decrease among workers of the maintenance sector of electric power company in the Northeast of Brazil.<sup>14</sup> In this study, the most frequent questions were related to somatic symptoms, although the highest prevalences were among those in the depressed and anxious mood group.

A cross-sectional study conducted in a hospital from Porto Alegre, Brazil, with a population of 660 nurses identified the first most frequent group of responses related to depressive-anxious mood, followed by questions related to somatic symptoms.<sup>15</sup>

It is noted that, due to the variety of findings in studies and ways of interpreting the results referring to the groups of symptoms, it can be seen that the predominant groups vary according to the nature of the work, although the most common ones described are those of humor depressive and anxious, decreased vital energy and somatic symptoms.

The higher prevalence of CMD among women is the most frequent finding in epidemiological studies. In the study, the tendency of CMD among women and men presents an unequal distribution, being the women more vulnerable to the disorders. In cross-sectional studies, this prevalence was higher (39.4%), for example, among women from the city of Recife submitted to a study on the prevalence of CMD and its relation to domestic work. Such high percentages may be associated with the high demand demanded in domestic, work and family work. When it comes to the need for comprehensive health care for women with mental disorders, there are difficulties in dealing with it. Such intervention in health requires intersectoral actions given the association of CMDs with poverty, overloads, violence and discrimination. In the control of CMDs with poverty, overloads, violence and discrimination.

A cross-sectional study used a sample of 562 elderly people living in the city of Feira de Santana/BA, and observed an increase in CMD in the low income stratum. Therefore, the higher prevalence among people with a worse socioeconomic level may be related to inadequate living conditions, poor housing and transportation, greater difficulty in accessing medical care, higher prevalence of morbidities and stress resulting from less access to social opportunities throughout life.<sup>3</sup>

Non-smokers showed a higher prevalence of CMD (87.3%), when compared to smokers, contradicting the literature, which associated tobacco use with mental disorders, demonstrating that people with these disorders smoke more. The literature also explains that smoking, due to nicotine, improves concentration and reduces the hyperstimulation caused by mental disorders.<sup>19</sup>

When it comes to the practice of physical exercises, the results corroborate to the literature findings, in which individuals who do not practice regular physical activities, have a higher CMD index. A study conducted with young people from Bahia found 39.9% of the population in this situation.<sup>20</sup> A research has found that individuals with regular physical exercise practices have less CMD, this is due to the fact that this physical activity can be understood as a form of leisure.<sup>21</sup> Considering a study conducted with

<sup>% =</sup> prevalence.

elderly people in Florianópolis/SC, identified that sedentary individuals were 2.74 and 2.38 times more likely to present CMD symptoms and other more serious problems.<sup>22</sup>

Regarding the relationship between self-reported stress and CMD, it was detected that such problem can be generated by the large number of people that these individuals have to deal with (listening, answering, clarifying, assisting, forwarding) daily, and they also have to pay attention so people who are on board can be safe. The noise presence in the work environment should also be approached as a factor of extreme importance, since during the work activity the workers live with constant noises of engines and of the passengers themselves.

The abandonment of employment often occurs due to the high demand demanded, whether due to the workload or the physical and mental effort at work. This can be seen in a study whose prevalence of CMD among teacher populations was high, ranging from 21.4% in private networks to 56.8% in the public network.<sup>23</sup>

Regarding the professional category, seamen from machinery had increased suspicion for CMD. This factor may be associated with the physical effort required at work, in addition to being constantly subject to the extreme noise of the boat engines. Both can be considered negative and suspicious points for the development of such disorders.

Regression analysis is associated with a higher chance of developing CMD among those who are stressed, those who think about leaving their jobs, and those who are sedentary and those with low incomes. In this case, nursing was able to act on guidelines for the reduction and control of stress, such as work gymnastics, and relaxing techniques in the work environment. As well as, the stimulation of the practice of physical exercises, before or after working day.

In this sense, the work nurse has the competence to study safety and dangerous conditions of the company, discussing with multidisciplinary teams and identifying improvements in the work environment. It shall draw up and implement health protection plans and programs, as well as conduct surveys of diseases and injuries, and then carry out and evaluate intervention actions. Emphasizing the need for specialization of these professionals, it was described that there is a lack of knowledge on how to deal with workers at risk or diagnosis of mental disorders.<sup>24</sup>

This study had the following limitations: the shortage of research with similar work groups, as addressed in the study, has become a challenge when comparing data to other researches. The population dynamics work, since the data collection took place in the working hours of the employees, occurring inside the vessels during the trips, and could be interrupted at any time, depending on the demand of that professional. Another limiting factor was the different cut-off points used for the SRQ-20. In addition, the average employee time in the company was only 5 years, which shows employee turnover. The cross section provides an

instantaneous image of the variable to be studied, and there is a need for other longitudinal studies.

## CONCLUSION

Among the 316 professionals who were part of the population, the prevalence was 14.24%. In summary, the results obtained in the present study pointed to the association between CMD and lower income per capita, professional category, seamen of machines, weekly load over 36 hours of work, nonsmokers, female, and be sedentary. Regarding the distribution of CMDs in the symptom groups, the result was more prevalent in depressive and anxious mood.

The identification of possible stressors at work corresponds to the beginning of the change that must be implemented in the workplace. These should be done early, developing solutions to minimize harmful effects, making daily life more productive and enjoyable.

Occupational health projects can be considered as good strategies to reduce risks and psychosocial complications arising from work. Health education through thematic wheels, educational pamphlets and lectures support the framework of information needed to provide worker subsidies for early detection of CMD symptoms and self-care. This study highlights the importance of research in this area and the need for new actions that alter the conditions of work, enabling a better quality of life and well-being of the worker.

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