

# The Influence of Social Relations, Leisure and Drug Use on Mental Health of Oil Industry Workers in Brazil

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*Abstract:* -The objective of this study was to investigate the influence of social relations, leisure and drug use on the mental health of workers in the oil industry of Bahia, Brazil. It is a descriptive, retrospective research, developed in 2018, involving 622 workers from an occupational health service, to whom the Self Reporting Questionnaire (SRQ-20) and a socioeconomic questionnaire were applied. Men (90.2%), aged between 50-59 years (45.6%), married (54.9%) and with a mean level of schooling (64.2%) prevailed in this study. Of the participants, 50% drink less than once a month and about 90% never smoked. An association between loss of interest in things and increase in alcohol consumption was identified ( $p < 0.05$ ). Another association can be found between feeling nervous, tense or worried and increasing tobacco consumption ( $p < 0.05$ ). In almost 95% of the participants, components of the family environment that positively interfere with health were identified, as well as the use of social and leisure environments to maintain and recover health. Social and leisure relations positively influence the mental health of the studied group, and alcohol and tobacco consumption are associated with common mental disorders (CMD).

*Key –Words:* Mental health – Oil industry – Health Promotion – Worker's health – Common mental disorders (CMD)

## 1 Introduction

Mental disorders in the world affect hundreds of millions of people and, if left untreated, represent a significant price in terms of suffering, disability and economic loss [1]. In Brazil, and according to data from the Statistical Yearbook of Social Security 2015[2], common mental disorders (CMD) appear as the third cause among active urban disease-aids, accounting 1,032,959 aids in 2015. CMDs are characterized by symptoms such as insomnia, fatigue, irritability, forgetfulness, difficulty in concentrating and somatic complaints [3]. In population-based studies conducted in industrialized countries, CMD prevalence varies from 7% to 30%. Often found in the community, CMD represent a high social and economic cost, since they are an important cause of lost days of work, as well as increasing demand in health services [4]. Psychiatric epidemiology studies have verified the association of CMD with variables related to living conditions and occupational structure and the Brazilian version of the Self-Reporting Questionnaire (SRQ-20) [5], which is widely used for tracking physical signs and psycho-emotional disorders.

## 2 Problem Formulation

This study aimed to investigate the influence of social relations, leisure and drug use on the mental health of workers in the oil industry, Bahia, Brazil. Developed in 2018, it is a descriptive, retrospective research, comprising 622 workers of an occupational oil health service, to which the Self Reporting Questionnaire (SRQ-20) was applied. SRQ-20 encompasses 20 dichotomous questions of the yes/no type, of which 4 refer to physical symptoms and 16 to psycho-emotional disorders, as well as a socioeconomic questionnaire. All individuals with an employment relationship with the company were included and excluded those away because of illness.

Data analyses were performed through SPSS version 25 for Windows (United States, New York, IBM Corporation). Chi-square test was used to compare demographic data of sample by sex  $t$ -test for independent samples was applied to compare SRQ-20 results by sex. The associations between drug consumption, social relations and leisure with the SRQ-20 were performed with the chi-square test. The study was approved by the

### 3 Problem Solution

According to Table 1, men (90.2%), aged between 50-59 years (45.6%), married (54.9%) and with middle level of schooling (64.2%), prevailed in this study.

Table 1. Sample's sociodemographic characterization and SRQ-20 results

	<i>n</i>	%	<i>n</i>	%	
	561	90.2	61	9.8	
<b>Age group (years)</b>					
≤ 29	22	3.9	5	8.2	
30-39	143	25.5	27	44.3	
40-49	109	19.4	13	21.3	<b>0.002</b>
50-59	256	45.6	15	24.6	
≥ 60	31	5.5	1	1.6	
<b>Marital status</b>					
Single	221	39.4	29	47.5	
Stable union	17	3.0	1	1.6	
Married	308	54.9	24	39.3	<b>0.001</b>
Divorced	13	2.3	7	11.5	
Other	2	0.4	0	0.0	
<b>Schooling level</b>					
Incomplete middle level	54	9.6	1	1.6	
Complete middle level	360	64.2	40	65.6	
Incomplete high level	2	0.4	0	0.0	0.191
Complete high level	114	20.3	6	9.8	
Complete high level with post-graduate studies	31	5.5	6	9.8	
<b>Anxiety-depressive mood</b>					
Do you feel nervous, tense or worried?	175	31.2	25	41.0	0.120
Are you easily scared?	22	3.9	8	13.1	<b>0.001</b>
Are you feeling sad lately?	59	10.5	10	16.4	0.165
Do you cry more than usual?	7	1.2	7	11.5	<b>0.001</b>
<b>Somatic symptoms</b>					
Do you have frequent headaches?	32	5.7	11	18.0	<b>0.002</b>
Do you sleep badly?	105	18.7	19	31.1	<b>0.021</b>
Do you have stomach discomfort?	78	13.9	8	13.1	0.865
Do you have bad digestion?	42	7.5	8	13.1	0.125
Do you lack appetite?	9	1.6	0	0.0	0.323
Do you have tremors in your hands?	15	2.7	3	4.9	0.321
<b>Decrease in vital energy</b>					
Do you get tired easily?	39	7.0	8	13.1	0.084
Do you have difficulty making a decision?	20	3.6	7	11.5	<b>0.004</b>
Are you having difficulty with your tasks?	47	8.4	5	8.2	0.961
Does your work bring suffering?	20	3.6	3	4.9	0.595
Do you feel tired all the time?	16	2.9	5	8.2	<b>0.028</b>
Do you have difficulty thinking clearly?	9	1.6	1	1.6	0.984
<b>Depressive thoughts</b>					
Do you feel unable to play a useful role in your life?	2	0.4	0	0.0	0.640
Have you lost interest in things?	14	2.5	3	4.9	0.270
Have you thought about ending your life?	0	0.0	0	0.0	n.a.
Do you feel useless in your life?	4	0.7	0	0.0	0.508

The results reveal that in what respects anxious-depressive mood, 41% of women and 32.2% of men feel nervous, tense or worried and 11% of men feel sad lately. Compared to men, women are more easily frightened ( $p = 0.001$ ) and cry more than usual ( $p = 0.001$ ). In the somatic symptoms domain, 18.7% of men reported poor sleep, a result lower than that of women, 31.1% ( $p = 0.021$ ). Another difference found refers to frequent

headaches, which 5.7% of men and 18% of women reported having ( $p = 0.002$ ). No significant differences were found between men and women in the case of stomach discomfort, respectively 14% and 13%. In terms of vital energy, 7% of men feel well and 8.4% have difficulty in having satisfaction in their tasks. Women have more difficulty in making decisions ( $p = 0.004$ ) and feel more tired when compared to men ( $p = 0.028$ ). In what relates assessing depressive thoughts, 3% of men and 4.9% of women lost interest in things. These differences are not statistically significant.

Table 2 presents the SRQ-20 results found in assessing the association between drug consumption, social relations and leisure.

Table 2. Associations between drug consumption, social relations and leisure, using SRQ-20 dimensions

	SRQ-20 Dimension	Have you lost interest in things?		<i>p</i>
		<i>n</i> (%) Yes	<i>n</i> (%) No	
Alcohol	Drinks once or more a week and consume 5 or more doses per occasion once a week or more	2 (22.2)	7 (77.8)	<0.05
	Drinks once a week or more and can either twice consume 5 or more doses per occasion at least once a week, but more than once a year	0 (0)	59 (100)	
	Drinks 1 to 3 times a month and can or 2 drink 5 doses or more at least once a year	2 (1.9)	102 (98.1)	
	Drinks less than once a month, but at least once per year and 2 drinks 5 or more doses on one occasion	8 (2.5)	316 (97.5)	
	Does not drink alcohol	5 (4.2)	114 (95.8)	
		Do you feel nervous, tense or worried?		
Tobacco		Yes	No	<0.05
	Smokes 15-24 cigarettes/day	2 (66.7)	1 (33.3)	
	Smokes 1-14 cigarettes/day	5 (38.5)	8 (61.5)	
	Former smoker	3 (33.3)	6 (66.7)	
	Ex-smoker for more than 5 years	6 (13.6)	38 (86.4)	
		Do you feel unable to play a useful role in your life?		
Social aspects and leisure		Yes	No	<0.001
	Uses leisure and social environments as a way of maintaining/recovering health and does not identify the importance of these actions in terms of well-being	0 (0)	7 (100)	
	Uses leisure and social environments as a way of maintaining/recovering health and identifies the importance of these actions in terms of well-being	1 (0.2)	594 (99.8)	
	Same old condition. Describes positive health outcomes	1 (11.1)	8 (88.9)	
		Do you feel useless in your life?		
		Yes	No	<0.001
Uses leisure and social environments as a way of maintaining/recovering health and does not identify the importance of these actions in terms of well-being	0 (0)	7 (100)		
Uses leisure and social environments as a way of maintaining/recovering health and identifies the importance of these actions in terms of well-being	3 (0.5)	592 (99.5)		
	Same old condition. Describes positive health outcomes	1 (11.1)	8 (88.9)	

It is important to note that more than about 50% of the participants drink less than once a month and about 90% never smoked. In the context of mental health, an association was identified between the loss of interest in things and an increase in alcohol consumption ( $p < 0.05$ ). Another association is found between feeling nervous, tense or worried and increased tobacco consumption ( $p < 0.05$ ).

Components of the family environment positively interfering in health as well as the use of leisure and

social environments to maintain and recover health were identified in almost 95% of the participants. An association was identified between the level of leisure and social relations and the inability to play a useful role in life ( $p < 0.001$ ) and with the feeling of worthlessness ( $p < 0.001$ ).

#### 4 Conclusion

Social and leisure relations positively influence the mental health of the studied group, and alcohol and tobacco consumption are associated with CMD. Considering the complexity of the workplace context, workplaces are favourable environments for addressing this topic in order to protect the workers' health and their social well-being through mainly collective strategies.

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