

Psychoactive substances and mental health in nursing professionals of the Family Health Strategy program (*Estratégia Saúde da Família*)

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ABSTRACT

The aim of this study was to investigate the association between the use of psychoactive substances and depression, stress, and anxiety among nursing professionals of the Family Health Strategy program (ESF - *Estratégia Saúde da Família*) teams. A cross-sectional study was carried out with 112 participants. Instruments for screening the abuse of alcohol and other drugs were used, as well as a scale that evaluates symptoms of depression, stress, and anxiety. The results showed that 44.6% of the interviewed professionals, most of whom were male, consumed alcohol in a binge-*drinking* pattern; 16.2% showed symptoms of depression; 15.2% showed symptoms of stress and 23.2% showed symptoms of anxiety. Binge drinking was associated with depression ($p = .035$). Positive correlations were found between depression, stress and anxiety and negative correlations were found between stress, age and working time. The abusive use of alcohol and the symptoms of mental disorders are correlated and need to be better investigated among the nursing professionals of the ESF program.

Descriptors: Nurse Practitioners; Occupational Health; Primary Health Care.

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INTRODUCTION

The Family Health Strategy program (ESF - *Estratégia Saúde da Família*) is the priority model of Primary Health Care (PHC), which in Brazil is also known as Basic Care (BC). This model advocates a set of individual and collective actions, within the first level of care of health systems, aimed at promoting health, disease prevention, treatment and rehabilitation⁽¹⁾.

The work performed by nursing professionals directly influences the quality of health care provided to patients and the community. However, the workers involved in the ESF face several barriers in their everyday lives, such as a shortage of human resources, excessive demand, a long and exhausting working day, overwhelming administrative demands, wage dissatisfaction and deficits in the physical structure of health equipment. These problems, coupled with failures in the Unified Health System care network and disarticulation among the various services that make up the intersectoral network, result in overload and can increase dissatisfaction with work, triggering suffering⁽²⁾.

The interviewed ESF workers showed a high prevalence of health problems, including mental health problems such as depression, anxiety, stress susceptibility, insomnia, fatigue, irritability, difficulty concentrating, faulty memory and somatic complaints⁽³⁾. In addition, evidence indicates that depression, anxiety, stress and chronic fatigue, as manifestations of mental disorders commonly related to work, can trigger the use and abuse of psychoactive substances, such as alcohol, tobacco and tranquilizers, as they are manifestations of mental disorders commonly related to illness associated with work⁽⁴⁻⁷⁾.

Considering the above, this research is significant as, by assessing the associations between the use of drugs and symptoms of mental disorders among ESF nursing professionals, it collaborates in the identification of epidemiological profiles and possibly in the early detection of issues related to the use of drugs and mental disorder symptoms. The incipient amount of studies dedicated to investigating this association in the Brazilian and foreign literature further justifies this work.

MATERIALS AND METHODS

The applied method was a cross-sectional study with a quantitative approach. The research was conducted with nursing professionals from the ESF teams of a municipality in the state of Minas Gerais, Brazil. Data were collected between May and August 2016.

During this time, the municipality had 74 ESF teams, composed of 170 professionals: 74 nurses and 96 nursing technicians and assistants. A simple random sample calculation, considering a 95% confidence interval [CI] and a sampling error of 6%, estimated a total of 103 participants. However, all nursing professionals were invited to participate. Thus, the sample was composed by 112 professionals who agreed to participate in this research.

The study was approved by the Research Ethics Committee of the Federal University of Uberlândia (CEP/UFU), Process N^o 1,585,311. In order not to interfere with their work routine, unit chiefs were previously contacted, and schedules were appointed for data collection. During the visits to the sites, all nursing professionals who agreed to participate in the study signed the Informed Consent Statement. Then, each participant was given a printed copy of the self-administered data collection instrument, composed of sociodemographic and occupational information, and three standardized instruments:

- a) Alcohol, Smoking and Substance Involvement Screening Test (ASSIST): an instrument for screening the consumption of alcohol, tobacco and other substances⁽⁸⁾;
- b) Alcohol Use Disorder Identification Test–Consumption (AUDIT-C): an instrument for screening alcohol consumption that assesses the amount and frequency of binge drinking (defined as five or more doses on a single occasion for men and four doses or more for women)⁽⁹⁾;
- c) Depression, Anxiety and Stress Scale (DASS-21): an instrument that evaluates the symptoms of depression, anxiety and stress⁽¹⁰⁾.

All the instruments applied were validated in the Brazilian context and showed adequate psychometric properties, with good levels of internal reliability.

The data were submitted to descriptive and bivariate statistical analyzes. The statistical tests employed were Chi-Square (χ^2) to evaluate the association of the categorical variables and the Spearman's Correlation Coefficient (Rho) to verify the correlation between two dependent samples. For all analyzes, the level of significance (value of *p*) was set as 0.05. The results were expressed as absolute (n) and relative (%) frequencies.

RESULTS

The sample consisted of 112 nursing professionals, predominantly female, with a mean age of 37.4 years, who worked as nursing technicians or nurses, with a mean time of professional performance of 9.12 years.

Table 1: Sociodemographic profile of nursing professionals from ESF teams (N=112). Uberlândia, MG, Brazil, 2016.

		N	%
Gender	Female	105	93.8
	Male	7	6.2
Marital status	Married	74	66.1
	Single	33	29.5
	Widow/widower	4	3.6
	Did not answer	1	0.9
Position	Nursing assistant	5	4.5
	Nursing technician	54	48.2
	Nurse	53	47.3
Education	High School/Elementary	43	44.4
	Higher Education	54	48.2
	Did not answer	15	13.4

More than half of the participants admitted to having already used alcohol at least once in their lifetime and almost half reported binge drinking behaviors⁽⁹⁾. The consumption of alcohol at least once in a lifetime was higher among professionals with higher education and binge drinking was more expressive among male participants, with statistically significant differences (Table 2).

As for the consumption of substances other than alcohol, there was a relatively low number of participants reporting use in the last three months and a higher frequency of binge drinking among the ESF nursing professionals. At least once in a lifetime use and abusive use were predominant among males, with statistically significant differences (Table 3).

Table 2: Alcohol consumption patterns of the nursing professionals in the ESF (N=112). Uberlândia, MG, Brazil, 2016.

		Use in lifetime		Use within the last three months		Binge drinking	
		N	%	N	%	N	%
	TOTAL	58	51.8	44	39.3	55	44.6
Gender	Female	55	54.5	41	43.2	44	41.9
	Male	3	60.0	3	75.0	06	85.7
		$\chi^2(1)=0.059$ $p=0.808$		$\chi^2(1)=1.576$ $p=0.209$		$\chi^2(1)=5.097$ $p=0.024^*$	
Position	Nursing assistant	4	40	4	40	6	50
	Nursing technician	20	47.6	13	35.1	19	43.2
	Nurse	33	64.7	25	51	24	45.3
		$\chi^2(2)=3.775$ $p=0.151$		$\chi^2(2)=2.225$ $p=0.329$		$\chi^2(2)=.182$ $p=0.913$	
Partner	Yes	38	54.3	13	20.6	29	39.2
	No	20	57.1	6	17.1	20	51.4
		$\chi^2(1)=.077$ $p=0.781$		$\chi^2(1)=.176$ $p=0.675$		$\chi^2(1)=2.211$ $p=0.137$	
Education	High School/Elementary	19	52.8	15	46.9	18	47.4
	Higher Education	35	67.3	26	53.1	27	50
		$\chi^2(2)=6.389$ $p=0.041^*$		$\chi^2(2)=4.208$ $p=0.122$		$\chi^2(2)=1.652$ $p=0.438$	

Note: Chi-square test (χ^2), * p value <0.05.

Table 3: Use of psychoactive substances (except alcohol) among ESF professionals (N=112). Uberlândia, MG, Brazil, 2016.

		Use in lifetime		Use within the last three months		Abusive use	
		N	%	N	%	N	%
	TOTAL	12	10.7	4	3.6	4	3.6
Gender	Female	10	11.9	3	3,5	3	4.2
	Male	2	100	1	20	1	50
		$\chi^2(1)=12,62$ $p<0.001^*$		$\chi^2(1)=3.01$ $p=0.082$		$\chi^2(1)=5.09$ $p=0.024^*$	
Position	Nursing assistant	1	12.5	-	-	-	-
	Nursing technician	2	6.2	2	6.1	2	8
	Nurse	9	20.5	2	4.4	2	5
		$\chi^2(2)=3.076$ $p=0.215$		$\chi^2(2)=652$ $p=0.722$		$\chi^2(2)=720$ $p=0.698$	
Lives with a partner	Yes	7	11	2	3,4	2	4.1
	No	5	22.7	2	7.4	2	10
		$\chi^2(2)=2.135$ $p=0.344$		$\chi^2(2)=0.843$ $p=0.656$		$\chi^2(2)=1.132$ $p=0.568$	
Education	High School/Elementary	3	12	2	7.1	-	-
	Higher Education	9	20.5	2	4.3	12	14.4
		$\chi^2(2)=1.447$ $p=0.485$		$\chi^2(2)=.387$ $p=0.824$		$\chi^2(2)=.504$ $p=0.478$	

Note: Chi-square test (χ^2), * p value <0.05.

Regarding the symptoms that suggest depression, anxiety, and stress (DASS), the results pointed to the prevalence of anxiety symptoms, followed by depression and stress; however, with no statistically significant differences when considering sociodemographic characteristics (Table 4).

Table 4: Sociodemographic characteristics and symptoms of depression, stress and anxiety among ESF professionals (N=112). Uberlândia, MG, Brazil, 2016.

		Symptoms					
		Depression		Stress		Anxiety	
		N	%	N	%	N	%
TOTAL		18	16.1	17	15.2	26	23.2
Gender	Female	17	18.7	17	18.9	25	26.9
	Male	1	16.7	-	-	1	16.7
		$\chi^2(1) = 0.015$ $p < 0.902$		$\chi^2(1) = 1.377$ $p = 0.241$		$\chi^2(1) = 0.304$ $p = 0.584$	
Position	Nursing assistant	1	10	-	-	-	-
	Nursing technician	9	25.7	8	25.3	12	32.4
	Nurse	8	16	9	18	14	25
		$\chi^2(2) = 1.848$ $p = 0.397$		$\chi^2(2) = 2.888$ $p = 0.236$		$\chi^2(2) = 4.296$ $p = 0.117$	
Lives with partner	Yes	12	19	10	16.1	16	25
	No	06	18.2	07	20.6	10	29.4
		$\chi^2(1) = 0.011$ $p = 0.918$		$\chi^2(1) = 0.300$ $p = 0.584$		$\chi^2(1) = 0.222$ $p = 0.638$	
Education	High School/Elementary	07	21.9	06	18.8	10	27.5
	Higher Education	08	15.7	09	17.6	14	28.2
		$\chi^2(1) = 0.509$ $p = 0.476$		$\chi^2(1) = 0.016$ $p = 0.899$		$\chi^2(1) = 0.039$ $p = 0.844$	

Note: Chi-square test (χ^2), * p -value <0.05.

As for the association between alcohol use, symptoms of depression, stress, and anxiety, more than a quarter of the professionals who admitted to binge drinking showed symptoms of depression, with statistically significant differences (Table 5).

Table 5: Binge drinking, use of other drugs and symptoms of depression, stress and anxiety among ESF professionals (N=112). Uberlândia, MG, Brazil, 2016.

	Alcohol binge drinking		Drug abuse (except alcohol)	
	N	%	N	%
Depression	12	27,9	1	25
	$\chi^2(1) = 4.468$ $p = 0.035^*$		$\chi^2(1) = .105$ $p = 0.745$	
Stress	8	19	1	25
	$\chi^2(1) = .092$ $p = 0.762$		$\chi^2(1) = .043$ $p = 0.835$	
Anxiety	13	31	1	25
	$\chi^2(2) = .828$ $p = 0.363$		$\chi^2(1) = .003$ $p = 0.959$	

Note: Chi-square test (χ^2), * p value <0.05.

In the correlation analysis using Spearman's Rank Correlation Test, a positive correlation was observed between depression and alcohol use ($r = .227$ $p = 0.047$) (data not shown in the table). Strong correlations were detected between depression and stress ($r = .635$ $P < 0.001$), depression and anxiety ($r = .785$ $P < 0.001$), as well as between stress and anxiety ($r = .785$ $P < 0.001$). Finally, there were negative correlations between stress and age ($r = -.268$ $p = 0.021$).

DISCUSSION

Regarding the sociodemographic characteristics, female predominance was observed, corroborating the results of studies that indicate the feminization of work in several health areas⁽³⁾. The age of the participants in this study was close to that observed by an earlier study developed with Health Family Teams in the South and Northeast of Brazil, which showed a mean age of 37.8 years⁽³⁾.

Concerning the use of psychoactive substances, an alarming fact revealed by this research refers to the frequency of binge drinking observed among participants, similar to what was found in a study carried out in Colombia, which showed that 60% of professionals consumed alcoholic beverages in the last three months, and abusive use or alcohol dependency was identified in 8.3% of the professionals⁽¹¹⁾.

Studies that investigated the level of binge-drinking alcohol consumption by nursing professionals show similar rates to those found in the general population⁽¹²⁻¹³⁾. Binge drinking may be associated not only with mental disorders but also with physical and social problems⁽¹⁴⁾.

Another result of the present study refers to the consumption of substances other than alcohol among ESF professionals, with the predominance of male workers in the category "use in lifetime" and "abusive consumption". This result was also observed in other studies^(12,15) which investigated the use of substances other than alcohol. A study conducted in Canada identified drug abuse (excluding alcohol) among 1.9% of participants⁽¹⁵⁾. In Colombia, a survey among nurses who worked in BC showed that 45% had used tobacco, 40% had used energy drinks and 20% had used antidepressants and barbiturates⁽¹¹⁾.

An important complication factor for nursing professionals who abuse alcohol or other drugs is that they face feelings of stigma, guilt, and shame, which end up hindering or delaying the early search for specialized help. In addition, the use of psychotropic drugs is often associated with intrinsic factors (difficulties in dealing with death, pain, and the suffering that permeate daily work) and with extrinsic factors to the professional practice (excessive hours, inadequate infrastructure, accumulation of tasks, responsibilities in excess)⁽¹²⁾.

Substance abuse among nursing professionals has two negative consequences: one related to the health of the professional and the other to the relationship with patients. Thus, in addition to contributing to an increase in the volume of retirements and claims for disability and incapacitation, substance abuse may be related to the increase in the number of work-related accidents⁽¹⁶⁾.

Specifically regarding the stress indexes, the present study pointed out to the expressive presence of participants with symptomatic manifestations of this severity. Research carried out with professionals working in BC in Belo Horizonte, Minas Gerais, Brazil, found that 19.4% of the professionals showed work stress due to the high work load and high work demand⁽¹⁷⁾.

The present study also pointed out an expressive incidence of anxious symptoms among participants. A study conducted with professionals working in an Intensive Care Unit in the state of São Paulo, Brazil, detected anxiety symptoms in 15% of the evaluated subjects⁽¹⁸⁾.

Depressive symptoms were also verified in the participants of the present study. In studies conducted with nursing team professionals working in hospital settings, the prevalence of symptomatic depression ranged from 13% to 38%⁽¹⁹⁻²⁰⁾ and was related to inadequate working conditions and long working hours.

A very important issue raised by the present investigation is that binge drinking cases are clearly associated with symptoms of depression. No studies were found in indexed databases that evaluated the relationship between alcohol use and depression specifically in ESF nursing professionals.

Other studies indicate that there is a tendency to comorbidity in the relation of depression and abusive use of alcohol and/or other drugs. This aspect is worthy of notice, since the presence of depression and substance abuse are among the main predisposing factors for suicide among nursing professionals⁽²¹⁻²²⁾. This study found correlations between depression and stress, anxiety and depression, as well as between stress and anxiety. These correlations were also reported by other research, in which the strenuous and unhealthy working environment emerges as the main stress-triggering factor concomitantly with other symptoms suggestive of psychic suffering^(19,22).

Negative correlations between stress and age can be observed, as well as between stress and working time, which suggest that the lower the age and working time of nursing professionals, the higher the stress levels. These results were also found in studies conducted in Taiwan and Australia⁽²³⁻²⁴⁾. One of the possible explanations for this phenomenon would be the fact that, the younger the nurses, the greater their domestic responsibilities would be, resulting in work overload and increased pressure for results⁽²⁵⁾.

One of the limitations of this study is that it was performed with nursing professionals who work in ESF teams from a single municipality. Another point to be highlighted, but which does not specifically refer to the design of the present research, is the lack of studies that involve the relationship between the symptoms of mental disorder and the use of psychoactive substances by nursing professionals working in the ESF, which makes it difficult to compare with research results from other contexts.

CONCLUSION

This study demonstrated that nursing professionals who work in ESF teams show considerable levels of binge drinking, and that this problematic consumption of alcohol is related to high symptomatic levels of depression. Other relevant results obtained are that male professionals are more vulnerable to the abusive use of alcohol and other drugs and workers with lower age and work time tend to present higher levels of stress.

The results found may contribute to overcoming deficiencies reported in the adoption of specific strategies aimed at promoting the mental health of the nursing professional who works in the ESF settings. These professionals face particularities in their work routine that put them in contact with a multiplicity of challenges in their daily practices and can increase their vulnerability to mental disorders.

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