Prevalence and factors associated with common mental disorder in rural settlers*

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Objective: to estimate prevalence and factors associated with common mental disorder in rural settlement dwellers. Methods: a cross-sectional study was carried out in 162 settlement residents located in the Center-West region of Brazil. A semi-structured questionnaire was used, the probability of common mental disorder obtained through the Self-Reporting Questionnaire (SRQ-20) and family functionality was assessed by the Family APGAR instrument. The data were analyzed in the STATA program. Results: the prevalence of probability of common mental disorder was estimated with a 95% confidence interval. Poisson regression analysis with robust variance was used to evaluate the association between common mental disorder and potential predictors. The prevalence of the possibility of mental disorder was 24.1%. The variables "female sex", "exposure to violence" and "use of hypnotics / sedatives" were associated. Conclusion: it was verified that such predictors should be considered in the health care of this population, regarding health prevention and promotion practices, in addition to reflecting the need for articulation of public policies that approximate the rural population and the health sector, regardless of territorial barriers.

Descriptors: Prevalence; Rural Population; Mental Disorders; Primary Health Care.

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Prevalência e fatores associados ao
transtorno mental comum em assentados rurais

Objetivo: estimar prevalência e fatores associados ao transtorno mental comum em moradores de um assentamento rural. Métodos: estudo transversal realizado em 162 residentes de assentamento localizado na região Centro-Oeste do Brasil. Foi aplicado questionário semiestruturado, a probabilidade de transtorno mental comum obtida através do *Self-Reporting Questionnaire* (SRQ-20) e a funcionalidade familiar foi avaliada pelo instrumento APGAR de Família. Os dados foram analisados no programa STATA. Resultados: a prevalência de probabilidade de transtorno mental comum foi estimada com intervalo de confiança de 95%. Foi utilizada a análise de regressão de *Poisson* com variância robusta para avaliar a associação entre transtorno mental comum e potenciais preditores. A prevalência de possibilidade de transtorno mental foi de 24,1%. As variáveis "sexo feminino", "exposição à violência" e "uso de hipnóticos/sedativos" foram associadas. Conclusão: verificou-se que tais preditores devem ser considerados na atenção à saúde dessa população, no que tange às práticas de prevenção e promoção da saúde, além de refletir a necessidade de articulação de políticas públicas que aproximem a população rural e o setor saúde, independentemente de barreiras territoriais.

Descritores: Prevalência; População Rural; Transtornos Mentais; Atenção Primária à Saúde.

Prevalencia y factores asociados al
trastorno mental común en asentados rurales

Objetivo: estimar prevalencia y factores asociados al trastorno mental común en moradores de un asentamiento rural. Método: estudio transversal realizado en 162 residentes de asentamiento localizado en la región Centro-Oeste de Brasil. Se aplicó un cuestionario semiestructurado, la probabilidad de trastorno mental común obtenida a través del Self-Reporting Questionnaire (SRQ-20) y la funcionalidad familiar fue evaluada por el instrumento APGAR de Familia. Los datos se analizaron en el programa STATA. Resultados: la prevalencia de la probabilidad de trastorno mental común fue estimada con un intervalo de confianza del 95%. Se utilizó el análisis de regresión de Poisson con varianza robusta para evaluar la asociación entre el trastorno mental común y los potenciales predictores. La prevalencia de trastorno mental fue de 24,1%. Las variables "sexo femenino", "exposición a la violencia" y "uso de hipnóticos / sedantes" se asociaron. Conclusión: se verificó que tales predictores deben ser considerados en la atención a la salud de esa población, en lo que se refiere a las prácticas de prevención y promoción de la salud, además de reflejar la necesidad de articulación de políticas públicas que acerquen a la población rural y al sector salud, independientemente de las barreras territoriales.

Descriptores: Prevalencia; Población Rural; Trastornos Mentales; Atención Primaria de Salud.

Introduction

Psychiatric problems are a significant burden of diseases worldwide, accounting for one-third of all global morbidities[1]. Mental disorders are pathologies shown by a set of symptoms that affect the individuals in their cognitive, physical, emotional and behavioral functions, with negative influence on their daily activities, such as work and social relationships[2].

Multiple factors have been associated with the presence of common mental disorder (CMD), such as adulthood, female, divorced or single marital status, low family income, education level, and exposure to violence and family conflicts[3-5]. Also, some previous diagnoses, such as the presence of asthma, arthritis, heart attack, diabetes, epilepsy, osteoporosis, and tuberculosis are related to the presence of CMD, especially depression[6], constituting comorbidities pictures.

The group of common mental disorders (CMD) or non-psychotic disorders are recognized among these disorders, which includes obsessive-compulsive disorder, anxiety, depression, panic, phobias, and somatoform disorders, which are highly prevalent throughout the world[7]. In the context of CMD, research shows high prevalence of major depression and anxiety, with prevalence that fluctuate in the different regions of the world with respectively maximum values of, 14.5 and 15.5% in Asia; 73.6 and 81.8% in Europe; 49.8 and 69.7% in Latin America; and 47.0 and 43.7% in North Africa[1].

In Brazil, data on the CMD epidemiology in rural population are scarce[3-5,8]. In a study conducted in 482 rural settlements of Pernambuco, the prevalence found was 36.0%[3]. Research conducted in the rural area of Rio Grande do Norte estimated a prevalence of 43.6% in a sample of 61 women[4]. In another study, the percentage of CMD in 163 rural women was 56.2%[8]. In this context, residents of rural settlements are a population with high psychosocial vulnerability, as they experience risk factors such as poor living conditions, low socioeconomic power, precarious transportation, scarcity of natural and public resources, lack of social support, lack of health and alcohol use and abuse, since they interfere in the quality of life, since they produce stress that can be related to the health conditions and favoring the development of CMD[4-5].

The fact that there is a relative scarcity of research on mental health in rural residents in the country justifies the need for further studies that provide relevant data for the implementation of prevention strategies at primary and secondary level as well as health promotion of rural settlements to assist in the planning of health interventions and practices aimed at mental well-being in these communities[4-5,9]. Thus, the objective of this study was to estimate the prevalence and factors associated with the common mental disorder in individuals from a rural settlement.

Methods

This is a cross-sectional, population-based study conducted in residents of a rural settlement located in the southeastern region of the State of Goiás, in the Center-West region of Brazil, conducted between September and November 2014. The settlement was officially created in 2005, with 84 families and a total population of 250 individuals between minors and those over 18 years old. Residents experience poor living conditions, such as lack of treated water, sewage, regular garbage collection, and local health unit.

The following inclusion criteria were considered: being 18 years old or older and living in the settlement for at least six months. Individuals with a medical diagnosis or self-report of severe and persistent mental disorder (psychotic disorders or bipolar affective disorder), as well as those who were not in the residence in up to three visits of the field researchers were excluded from the study.

During the investigation period, all potentially eligible settlers were invited to participate in the study. The pilot test was performed with four individuals randomly drawn during a meeting at the headquarters settlement, and these results were not in the study database. The settlers were approached in their residences in the morning or afternoon sessions and focused on objectives, methods, benefits, and potential risks of their participation. Those who agreed to participate signed the Informed Consent Form (TCLE) and were interviewed in a private place.

The data were obtained through face-to-face interviews, using a structured instrument on sociodemographic characteristics, exposure to violence (robbery, fights, assault, sexual violence, among others), use of psychoactive substances, family functionality and CMD tracking. The average duration of the interviews was approximately 20 minutes each.

The *Self-Reporting Questionnaire* (SRQ-20), validated in Brazil and widely used in epidemiological studies, was applied to identify the possibility of CMD. This instrument is composed of 20 questions related to non-psychotic mental health conditions in the last

30 days. The answers are of the type "yes" or "no", in which each affirmative question has a value of one. The final sum ranges from zero to 20, where the zero score indicates no probability for CMD and 20 indicates an extreme probability for CMD. Score ≥ seven suggests the presence of CMD[10].

The family functionality was assessed by the family APGAR instrument, recommended by the World Health Organization and the Ministry of Health. It assesses family functionality through five items: Adaptation, Partnership, Growth, Affection, and Resolve (Resolving Capacity). It is a brief instrument, with low cost and easy application, and which assists in the early identification of family dysfunction. Scores are assigned for each of the five items, ranging from zero to 10 points: zero to 4 for high family dysfunction (HFD); 5 and 6 for moderate family dysfunction (MFD); and 7 to 10 for good family function (GFD)[11-12].

The dependent variable of this study was the probability of CMD, defined as a score ≥ 7 on the SRQ-20. The following independent variables were evaluated: age (years old), gender, education level, marital status and having children. Regarding the religion, three categories were analyzed: without religion, evangelical religion and Catholic religion. They were also observed: exposure to violence (suffered non-fatal injuries resulting from self-harm, interpersonal aggression or collective violence)[13]; regular practice of physical activity, comprised of at least 150 minutes of moderate physical activity per week, or 75 minutes of vigorous physical activity, with a weekly frequency not determined, and in sessions lasting at least 10 minutes[14]; use of hypnotics or sedatives prescribed by health professionals; alcohol consumption in life; and tobacco use in the last 30 days. For familial dysfunction, scores ≥7 were considered in the family APGAR instrument.

The data were analyzed in the STATA program, version 12.0. The prevalence of CMD probability was estimated with a 95% confidence interval (95% CI). Poisson regression analysis with robust variance was used to evaluate the association between potential predictors and CMD. To verify the differences between proportions, the chi-square test was used. Also, the Pearson correlation test (r) was performed to analyze the relationship between the SRQ-20 and the family APGAR. Statistically significant values of $p<0.05$ were considered statistically significant.

This research was approved by the Research Ethics Committee of the Federal University of Goiás (Protocol number 162/2012, CAAE: 33249014.4.0000.5083) and the ethical principles of research involving human beings were respected governed by Resolution 466/2012.

Results

Seven of the total settlement residents aged 18 or over (n=200), refused to participate, 10 individuals had a medical diagnosis or reported severe and persistent mental disorder, and 21 were not residing within three visits. Thus, 162 study participants participated in the study, whose average age was 41.3 years old. The most prevalent ages of the study participants were >44 years old (47.6%), <31 years old (27.4%) and 31-44 years old (25%), respectively. Of the total number of participants, 54.3% were male, 52.9% were less than eight years old, 69.2% were married and 47.1% were Catholic.

The mean SRQ-20 score found in this study was 4.7. The prevalence of possibility of CMD among the settlers was 24.1%.

Table 1 - Prevalence and factors associated with common mental disorder in rural settlers. Ipameri, GO, Brasil, 2014

Variables	Common Mental Disorder		Gross PR† (IC95%)	p-value	PR† adjusted (CI95%)	p-value
	Positive/ Total*	%				
Gender						
Male	12/88	13.6	1.00		1.00	
Female	27/74	36.5	1.30 (1.08-1.33)	< 0.01	1.12 (1.02-1.24)	**0.01**

Table 1 continues on next page...

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Variables	Common Mental Disorder		Gross PR[†] (IC95%)	p-value	PR[†] adjusted (CI95%)	p-value
	Positive/ Total*	%				
Education level (years old)						
>8	14/77	18.2	1.00		1.00	
≤8	25/85	29.4	1.09 (0.98-1.21)	0.09	1.07 (0.97-1.18)	0.46
Marital status						
Single	10/49	20.4	1.00			
Married	29/113	25.7	1.04 (0.93-1.16)	0.46		
Children						
No	7/47	14.9	1.00		1.00	
Yes	32/115	27.8	1.11 (0.99-1.24)	0.06	1.04 (0.93-1.15)	0.46
Religion						
No	2/18	11.1	1.00		1.00	
Evangelical	18/73	27.3	1.14 (0.97-1.33)	0.09	1.02 (0.90-1.16)	0.73
Catholic	19/81	24.4	1.11 (0.96-1.30)	0.14	0.97 (0.86-1.10)	0.70
Exposure to violence[‡]						
No	28/132	21.2	1.00		1.00	
Yes	11/30	36.7	1.12 (0.98-1.29)	0.09	1.14 (1.01-1.27)	**0.01**
Regular physical activity practice						
Yes	12/54	22.2	1.00			
No	27/108	25.0	1.02 (0.91-1.14)	0.69		
Consumption of hypnotics or sedatives[§]						
No	29/145	20.0	1.00		1.00	
Yes	10/17	58.8	1.38 (1.16-1.63)	< 0.01	1.23 (1.05-1.45)	**0.01**
Alcohol consumption[§]						
No	33/131	25.2	1.00			
Yes	6/31	19.4	0.95 (0.83-1.08)	0.47		
Tobacco use[§]						
No	29/130	22.3	1.00			
Yes	10/32	31.2	1.07 (0.93-1.22)	0.30		

Variables	Common Mental Disorder		Gross PR[†] (IC95%)	p-value	PR[†] adjusted (CI95%)	p-value
	Positive/ Total*	%				
Family dysfunction						
No	33/145	22.8	1.00			
Yes	6/17	35.3	1.10 (0.92-1.31)	0.28		

*Number of valid answers; †PR: prevalence ratio; ‡on the last year; §in the last 30 days

Table 1 shows the prevalence and factors associated with the possibility of CMD. In multiple regression analysis, the following variables remained associated with the outcome: female, exposure to violence, and use of hypnotics and/or sedatives.

Figure 1 represents the correlation between the family APGAR and the SRQ-20 items. The results show a negative correlation between them. Thus, an increase in the APGAR score decreased by 2.6 times the SRQ-20 score.
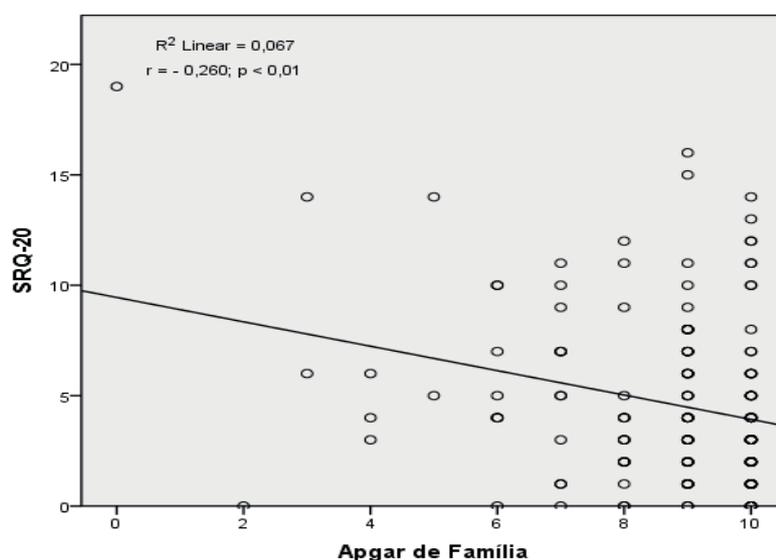

Figure 1 - Correlation between family APGAR and Self-Reporting Questionnaire in 162 rural settlers. Ipameri, GO, Brazil, 2014

Discussion

This study analyzed the prevalence of CMD probability and associated factors in individuals living in rural settlements in the interior of the state of Goiás, due to the lack of work related to the mental health of the population studied[4-5]. In this sense, a study carried out in an urban area shows a prevalence of higher CMD (31.4%)[15] than in this study sample (24.1%) and lower than in other studies in rural settlements (43.6%)[4-5] and rural community (36%)[3].

The prevalence of CMD probability varies mainly because of the type of diagnostic instrument, the time

of evaluation of the symptoms and the characteristics of the study population. In Brazil, using the General Health Questionnaire (GHQ-12) and the Hospital Anxiety and Depression Scale, a prevalence of CMD was estimated at 51.9% in the State of Rio de Janeiro, 53.3% in São Paulo, 64.3% in Fortaleza and 57.7% in Porto Alegre[15]. Depressive symptoms and major depressive disorder are the most common in the Brazilian adult population, with one in seven adults suffering from depressive symptoms, and one in 12 adults presenting with major depressive disorder, with prevalence of 14 and 17%, respectively[16].

When considering individuals residing in rural communities in two African countries, the prevalence of SRQ-20-treated CMD was 13.8% in Ethiopia and 10.8% in Kenya using the Psychosis Screening Questionnaire (PSQ) and Clinical Interview Schedule-Revised (CIS-R)[7,9]. The prevalence found in this study was lower than in individuals from a rural settlement located in Rio Grande do Norte (43.6%), once there was a difference in sample size and some sociodemographic characteristics of the population, such as marital status and gender[4-5].

In this study, females presented a higher prevalence of CMD than men, corroborated by other investigations[4-5,17-18]. In a meta-analysis with studies conducted in 59 countries, women presented slightly higher rates of CMD (19.8%) than men (15.2%), as Poland and Africa, where rates of depressive disorders, phobic and mood disorders were higher in women[17-18]. The difficulties in the life of women from rural settlements make them more vulnerable to illness in relation to mental health due to a scenario of domestic and agricultural workload, gender violence, low levels of education and income, low level of social support, relationships marital and cultural norms[1,4-5].

The presence of mental disorders can be attributed to violence, since individuals exposed to traumatic events in the community, such as accidents and threats with a weapon, being more vulnerable to injuries, such as posttraumatic disorders[19]. Rural workers associate family conflicts and perpetuated violence to situations of vulnerability when using alcohol and other drugs[20].

Study shows prevalence of women in the countryside who have already suffered aggression or sexual abuse of 55%. In this sense, cases of gender violence contribute to the reproduction of the problem of violence in rural environments, due to socioeconomic and cultural elements[4-5,20]. Although violence is a complex phenomenon, requiring further investigation, this study found an association between CMD and exposure to situations of violence in the community.

Also, there was a higher prevalence of CMD in individuals who used hypnotics and/or sedatives in the last 30 days. This discussion may have different dimensions, since, although such association is expected due to the greater use of this category of drugs in the therapeutic approach of CMD, these substances are considered to be responsible for triggering, above all, anxiety and mood disorders[21]. Also, these disorders may stimulate a search for central nervous system depressants, due to their effect on softening uncomfortable symptoms inherent to the psychopathologies included in CMD[22]. The

indiscriminate use of psychotropic drugs is a health problem to be faced in the rural context since drug prescription is the only resource accessed in the mental health care of individuals living in rural areas[5,20].

The negative correlation between APGAR and SRQ-20 suggests an increased risk of CMD with increased family dysfunction. A similar outcome was observed in studies conducted in Brazil and Portugal, with the use of family APGAR. In Brazil, there was a prevalence of 77.5%, with an association (p<0.00) of depressive symptoms in the older adults with moderate and/or elevated dysfunction[23]. In Portugal, caregivers of mentally ill people living in rural areas and working in a dysfunctional family environment were associated with higher levels of depression (p=0.01) and stress (p=0.00). Therefore, individuals exposed to environments with family conflicts present a higher risk of CMD, such as depression[24].

Although not associated, the variable religion is a protective factor for the mental health of the individuals, especially those who live in situations of greater psychosocial vulnerability such as rural settlers. Spirituality contributes to the improvement of individuals´ quality of life and gives positive meaning to suffering[5,25].

The limitations of the investigation refer to the transversal nature that makes inferences of cause and effect relationship impossible. Regarding the family APGAR and SRQ-20 screening instruments applied, both do not conclude diagnoses, requiring a more accurate and contextualized investigation to indicate a mental disorder or family dysfunction. The data were self-reported, that is, susceptible to memory and response bias. However, they point out the possibilities of an early, low cost and interdisciplinary approach to health care at the primary level, and promoting health.

Conclusion

The findings of this study indicated the high prevalence of CMD in rural settlers and their association with the variables female, exposure to violence and use of hypnotics/sedatives. These factors should be appreciated in the preventive and health promotion practices of this population, in terms of the scope of public policies, especially in housing, work, leisure, education, and lifestyle.

Also, this work shows the possibility of proposing public policies guidance that approaches the rural population and the health sector, regardless of territorial barriers. It is relevant to reflect on the intersectional strategies still incipient to carry out actions in the mental

health area, ratifying the integral care and longitudinally of the care given to the individual and the community living in the area.

Finally, the results of this research explain the indispensability of the adoption of SRQ-20 in the screening of the possibility of CMD in rural settlements as a way of systematizing care, as well as contributing to the enrichment of Nursing productions, to instrumentalize the professional practice guided by the scientific literature, and to envision the development of new epidemiological research focused on this population group.

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