Suicidal behavior during the COVID-19 pandemic: clinical aspects and associated factors

Comportamento suicida durante a pandemia da COVID-19: aspectos clínicos e fatores associados

Comportamiento suicida durante la pandemia de COVID-19: aspectos clínicos y factores asociados

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Abstract

Objective: To analyze the clinical aspects and factors associated with suicidal behavior during the COVID-19 pandemic.

Methods: Cross-sectional analytical study performed with care records of 130 patients who sought care in the psychiatric emergency department after suicidal ideation, planning or attempt. A form was used for sociodemographic, clinical and therapeutic characterization, and for identification of care needs and associated factors. Data analysis consisted of Fischer's exact test, Pearson's chi-square test and Poisson's regression, considering a significance level of 5%.

Results: Suicidal behavior was expressed by suicide attempt, ideation and planning. It was predominant in the female sex, young adults, unemployed, with low family income, and in patients with a history of mental disorder, psychiatric hospitalization, previous attempts and of therapeutic abandonment. The main psychic alterations involved anxiety, depression, feelings of hopelessness, audiovisual hallucinations and persecutory delusions. The consumption of psychoactive substances increased by up to 13.8 times the risk for suicide attempt, while situational crises increased suicidal ideation by up to 10.6 times. The loss of income and previous hospitalization were associated with manifestation of the behavior. Evidence of care involved drug interventions, surveillance measures, and hospital admission.

Conclusion: During the COVID-19 pandemic, suicidal behavior was associated with a greater predisposition to consume psychoactive substances, situational crises and loss of income. The need for public policies aimed at the identification, prevention and adequate management of risk states stands out.

Resumo

Objetivo: Analisar os aspectos clínicos e os fatores associados ao comportamento suicida durante a pandemia da COVID-19.

Métodos: Estudo transversal e analítico, realizado com registros assistenciais de 130 pacientes que buscaram atendimento em emergência psiquiátrica após ideação, planejamento ou tentativa de suicídio. Utilizou-se um formulário para caracterização sociodemográfica, clínica e terapêutica, assim como para identificação das necessidades de cuidados e dos fatores associados. A análise dos dados foi constituída pelos testes Exato de *Fischer*, Qui-quadrado de *Pearson* e pela Regressão de Poisson, considerando nível de significância de 5%.

Resultados: O comportamento suicida foi expresso pela tentativa de suicídio, ideação e planejamento, predominando no sexo feminino, em adultos jovens, desempregados e de baixa renda familiar, assim como em pacientes com histórico de transtorno mental, de internação psiquiátrica, de tentativas prévias e de abandono terapêutico. As principais alterações psíquicas envolveram ansiedade, depressão, sentimentos de

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desesperança, alucinações audiovisuais e delírios persecutórios. O consumo de substâncias psicoativas elevou em até 13,8 vezes o risco para tentativa de suicídio e as crises situacionais em 10,6 vezes a ideação. Ainda, a perda de renda e a internação anterior foram associados à manifestação do comportamento. As evidências de cuidados envolveram intervenções medicamentosas, medidas de vigilância e admissão hospitalar.

Conclusão: Durante a pandemia da COVID-19, o comportamento suicida foi associado à maior predisposição para o consumo de substâncias psicoativas, crises situacionais e perda de renda. Destaca-se a necessidade de políticas públicas voltadas para identificação, prevenção e gerenciamento adequado dos estados de risco.

Resumen

Objetivo: Analizar los aspectos clínicos y los factores asociados al comportamiento suicida durante la pandemia de COVID-19.

Métodos: Estudio transversal y analítico, realizado con registros asistenciales de 130 pacientes que buscaron atención en emergencia psiquiátrica después de ideación, planificación o intento de suicidio. Se utilizó un formulario para la caracterización sociodemográfica, clínica y terapéutica, como también para la identificación de las necesidades de cuidados y de los factores asociados. El análisis de los datos estuvo constituido por la prueba Exacta de *Fisher*, Ji cuadrado de *Pearson* y por la Regresión de Poisson, considerando un nivel de significancia del 5 %.

Resultados: El comportamiento suicida se expresó a través del intento de suicidio, ideación y planificación, con predominio del sexo femenino, adultos jóvenes, desempleados y con bajos ingresos familiares, así como pacientes con historial de trastorno mental, de internación psiquiátrica, de intentos previos y de abandono terapéutico. Las principales alteraciones psíquicas incluyeron ansiedad, depresión, sentimientos de desesperanza, alucinaciones audiovisuales y delirios de persecución. El consumo de substancias psicoactivas aumentó 13,8 veces el riesgo de intento de suicidio, y las crisis situacionales aumentaron 10,6 veces la ideación. Además, la pérdida de ingresos e internaciones anteriores se asociaron a la manifestación del comportamiento. Las evidencias de cuidados incluyeron intervenciones medicamentosas, medidas de vigilancia y admisión hospitalaria.

Conclusión: Durante la pandemia de COVID-19, el comportamiento suicida se asoció a un aumento de la predisposición al consumo de sustancias psicoactivas, crisis situacionales y pérdida de ingresos. Se destaca la necesidad de políticas públicas orientadas hacia la identificación, prevención y una gestión adecuada de los estados de riesgo.

Introduction

Suicidal behavior is a psychic manifestation that can vary in severity levels, configuring a complex, multidimensional, underestimated, progressive, universal and preventable phenomenon, in addition to representing the fifteenth leading cause of death in the global population and the second most frequent among adolescents and young adults.[1]

Expressed by deliberate and intentional acts of self-harm and by strong expectation of the fatal outcome, this behavior comprises ideation, planning, attempt and completed suicide, which most often results from the interaction between biopsychosocial, genetic, cultural and environmental factors.[2]

Global estimates by the World Health Organization (WHO) show the magnitude of the problem by demonstrating the global coefficient of mortality of 700 thousand cases in 2019.[3] Brazil stands out in this same perspective, as it remains among the ten countries with the highest absolute numbers of suicide and presents a growing trend amid the COVID-19 pandemic and epidemiological measures adopted that significantly disrupted social, labor, economic, political, cultural and health contexts, generating repercussions on mental health, in the family structure and the population's quality of life.[4-7]

In the literature, the pandemic context is associated with mental suffering and suicidal behavior, showing that the health crisis is a predictor of the abuse of psychoactive substances, loss of income, and of the development and intensification of stress, anxiety and depression, which increase the risk of emotional instability and self-inflicted violence.[8-11]

Despite the growing worldwide projections during the pandemic, evidence is still incipient and limited. This fact shows the need for further studies to understand the physical, epidemiological, emotional and financial predictors capable of determining the greater risk for suicidal behavior during the COVID-19 pandemic and to awaken in health managers and leaders the need for public policies favorable to the early recognition, screening, monitoring of vulnerable populations and implementation of prevention and control measures.[12,13]

Considering that suicidal behavior is one of the secondary events resulting from the health crisis that requires the foundation of care in elements of quality, efficacy and safety, the following question was structured: What are the clinical aspects and factors associated with suicidal behavior in people served

during the COVID-19 pandemic? Therefore, the aim of this study was to analyze the clinical aspects and factors associated with suicidal behavior during the COVID-19 pandemic.

Methods

Cross-sectional analytical study conducted from December 2020 to March 2021 in the psychiatric emergency of an institution located in Teresina, state of Piauí, Brazil that is a reference in the management of severe mental disorders.

This study constitutes the first methodological step in the construction and evaluation of the effects of a mobile application on care performance for the identification, risk classification and prevention of suicidal behavior. It corresponds to the exploratory phase that sought to characterize the profile and needs of patients treated after suicidal ideation, planning or attempt.

The technique for infinite populations was used to design the sample size, considering the presumed prevalence of suicide of 9.3%, margin of error of 5% and confidence level of 95%. Non-probabilistic assumptions were adopted for convenience for the selection. The presumed prevalence was determined by the local epidemiological indicator estimated by the Health Department of Piauí (Portuguese acronym: SESAPI).[14]

The study was conducted with 130 people of both sexes who sought psychiatric care after suicidal ideation, planning or attempt. Patients with clinical complications that made it impossible to remain in the institution or who required immediate transfer to other services, resulting in incomplete completion of the data collection form were excluded. People with suicidal behavior in all its stages were identified by a prior analysis of care records after the end of care in the psychiatric emergency department.

The sociodemographic, clinical and therapeutic characterization, and the identification of care needs were performed using an instrument that was developed based on scientific evidence.[13] This instrument was evaluated by three experts for consideration as to pertinence, objectivity, precision, clarity and adequacy to the proposed objectives.

In this sense, the investigated variables comprised the description of sex, age, schooling, marital status, religion, employment status, family income, origin, psychiatric symptoms, associated factors, stage of suicidal behavior, method adopted for the suicide attempt, place, shift, care taken and outcome.

Data collection took place after contacting the nurse responsible for the emergency department to identify participants who met the inclusion criteria, diagnostic certification and sample selection. To this end, the collection techniques involved the analysis of medical records, medical and nursing records, and the self-inflicted violence notification form from the Notifiable Diseases Information System - SINAN. There was no direct contact with participants given the recommendations imposed by the pandemic moment.

Data were entered into a double-entry spreadsheet in Microsoft Office Excel and exported to the Statistical Package for the Social Sciences (SPSS), aiming at quantitative analysis based on principles of descriptive and inferential statistics.

Sociodemographic, clinical and therapeutic variables were expressed by measures of central tendency (mean and standard deviation) and variability (maximum and minimum), as well as by absolute and relative frequencies.

Fischer's exact test and Pearson's chi-square test were used to assess associations between psychic alterations and clinical conditions with the stages of suicidal behavior. The odds ratio (OR) and adjusted analysis were performed using Poisson Regression with robust variance between the outcomes of suicide ideation, planning and attempt and sociodemographic and clinical data constituting the predictor variables. All analyzes in this study were conducted considering a confidence interval of 95% and a significance level of 5%, and results with p value less than 0.05 were significant.

This study was approved by the Research Ethics Committee of the Universidade Federal do Piauí and a favorable opinion was issued through process number 4.444.303 (Certificate of Presentation

of Ethical Appreciation: 39060920.6.0000.5214). Institutional authorization for the analysis of medical records and care records was obtained by signing the Term of Consent to the Use of Data.

Results

The descriptive analysis of results showed a predominance of females 69 (53.1%), mean age of 34.9 (12.9) years, ranging between 13 and 75 years, single 58 (44.6%), unemployed 60 (46.2%), with secondary education 59 (45.4%), family income of 1-2 minimum wages 95 (73.1%), Catholic 108 (83.1%) and origin from Teresina 84(64.6%). Suicidal behavior was mostly expressed by suicide attempt 67 (51.5%), followed by ideation 52 (40.0%) and planning 11 (8.5%). Table 1 presents the sociodemographic characterization of people treated in a psychiatric emergency department according to the identified behavior.

Symptoms of anxiety 93 (40.6%), depression 66 (28.8%) and feelings of hopelessness 47 (20.5%) prevailed. Other changes in the line of thought and sensory perception were evidenced, such as persecutory delusions and audiovisual hallucinations, present in 49 (21.4%) and 43 (18.8%) of the cases, respectively. Anhedonia 13 (5.7%), anguish 8 (3.5%), irritability 9 (3.9%) and isolation 7 (3.1%) were also reported symptoms in the evaluated records. Different clinical aspects were described, including a history of mental disorder 106 (81.5%), psychiatric hospitalization 64 (49.2%), previous suicide attempts 63 (48.5%) and irregular treatment 44 (33, 8%). Other predisposing factors to the behavior involved the consumption of psychoactive substances 78 (60.0%), situational crises related to the pandemic 64 (49.2%), loss of income 39 (30%), marital conflicts 20 (15.4%), family conflicts 10 (7.7%) and situations of physical or sexual abuse 5 (3.8%).

Suicide attempts 67 (100%) involved different methods; exogenous intoxication 26 (20.0%) and injury by a sharp object with suicidal intent 17 (13.1%) predominated in this study. Other methods with greater potential lethality were identified, such as hanging 16 (12.3%) and precipitation from a height 8 (6.2%). Among the evidence of care, all people underwent drug intervention, surveillance measures and hospital admission. The episode of self-inflicted violence was notified in 31 (46.3%) cases of attempted suicide. Suicidal behavior in all identified stages was significantly associated with consumption of psychoactive substances and situational crises ($p<0.05$). Meanwhile, the history of previous psychiatric hospitalization was associated with the expression of suicidal ideation and attempt ($p<0.05$) (Table 2).

Table 1. Sociodemographic characterization of people treated in a psychiatric emergency department according to suicidal behavior

Variables*	Ideation		Planning		Attempt	
	n(%)	M(SD)	n(%)	M(SD)	n(%)	M(SD)
Sex						
Male	25(48.1)		3(27.3)		33(49.25)	
Female	27(51.9)		8(72.7)		34(50.75)	
Age		35.7(12.2)		36.7(11.6)		33,0(13,5)
Marital status						
Single	25(48.1)		3(27.3)		30(44.8)	
Married/ common law marriage	14(29.9)		3(27.3)		26(38.8)	
Divorced	12(23.1)		5(45.4)		10(14.9)	
Widowed	1(1.9)		-(-)		1(1.5)	
Schooling						
Illiterate	2(3.8)		1(9.1)		2(3.0)	
Primary education	11(21.2)		1(9.1)		19(28.3)	
Secondary education	20(38.5)		7(63.6)		32(47.8)	
Tertiary education	19(36.5)		2(18.2)		14(20.9)	
Religion						
Catholic	39(75.0)		11(100.0)		58(86.6)	
Evangelical	10(19.3)		-(-)		6(8.9)	
Spiritist	1(1.9)		-(-)		-(-)	
Others	2(3.8)		-(-)		2(3.0)	
Work situation						
Unemployed	22(42.3)		4(36.4)		34(50.7)	
Formal employment	13(25.0)		1(9.1)		14(20.9)	
Self-employed	12(23.1)		2(18.2)		14(20.9)	
Retired	5(9.6)		4(36.4)		5(7.5)	
Family income						
Less than 1 MW	2(3.8)		1(9.1)		4(6.0)	
1-2 MW	38(73.1)		9(81.8)		48(71.6)	
3-5 MW	12(23.1)		1(9.1)		15(22.4)	
Origin						
Teresina	34(65.4)		9(81.8)		41(61.2)	
Hinterland of Piauí	16(30.8)		2(18.2)		18(26.9)	
Other states	2(3.8)		-(-)		8(11.9)	
Total	52(100)		11(100)		67(100)	

MW – Minimum wage (value in force during data collection period: BRL 1,145.00)

Table 2. Association between psychic alterations and risk conditions with suicidal behavior

Variables*	Ideation		Planning		Attempt	
	%**	p-value	%**	p-value	%**	p-value
Psychic changes						
Anxiety	63.5	0.096[a]	90.9	0.342[a]	74.6	0.421[a]
Delirium	42.2	0.209[a]	36.4	0.744[a]	32.8	0.239[a]
Hallucination	3.8	0.287[a]	18.2	0.205[a]	31.3	0.665[a]
Depressed mood	46.2	0.390[a]	54.5	0.955[a]	53.7	0.486[a]
Hopelessness	25.0	0.031[a]	45.4	0.677[a]	43.3	0.081[a]
Anguish	5.8	0.082[a]	-	-	7.5	0.522[a]
Anhedonia	7.7	0.474[a]	18.2	0.419[a]	10.4	0.861[a]
Irritability	5.8	0.672[a]	-	-	8.9	0.494[b]
Isolation	3.8	0.702[b]	9.1	0.069[a]	1.5	1.00[b]
Risk conditions						
Psychoactive substance	32.7	<0.001[a]	27.3	0.048[a]	86.6	<0.001[a]
Mental disorder	76.9	0.268[a]	63.3	0.163[a]	88.1	0.048[a]
Family conflicts	9.6	0.502[a]	9.1	0.930[a]	6.0	0.447[a]
Situational crises	80.8	<0.001[a]	90.9	0.013[a]	17.9	<0.001[a]
Previous attempts	40.4	0.132[a]	54.5	0.473[a]	53.8	0.215[a]
Physical or sexual abuse	-	-	-	-	7.5	0.058[b]
Irregular treatment	40.4	0.198[a]	18.2	0.187[a]	31.3	0.534[a]
Losss of income	15.4	0.003[a]	27.3	0.692[a]	41.8	0.002[a]
Marital crisis	15.4	1.00[a]	18.2	0.897[a]	14.9	0.881[a]
Family loss	1.9	0.400[a]	-	-	-	-
Previous hospitalization	23.0	<0.001[a]	327.3	0.248[a]	73.1	<0.001[a]

*The sum of frequencies is greater than 100% because the patient may have manifested more than one symptom or associated condition; **Percentage corresponding to the category "yes", indicating the presence of the symptom; [a]Pearson's Chi-Square Test; [b]Fisher's Exact Test

The odds ratio between factors associated with suicidal ideation, planning and attempt are shown in Table 3. The use of psychoactive substances during the pandemic increased the chances of suicide attempt by up to 13.8 times, and situational crises increased the chances of suicidal ideation by 10.6 times. Loss of income and previous hospitalization were also determinants for the manifestation of suicidal behavior (Table 3).

Table 3. Odds ratio between associated factors and suicidal behavior

Variables*	Ideation		Planning		Attempt	
	OR	CI (95%)	OR	CI (95%)	OR	CI (95%)
Psychoactive substances	0.13	0.06-0.29	-	-	13.8	5.74-33.40
Situational crises	10.6	4.57-24.95	5.92	1.24-28.22	0.04	0.01-0.11
Income loss	0.27	0.11-0.66	-	-	3.39	1.50-7.64
Previous hospitalizationr	0.15	0.06-0.33	-	-	8.71	3.94-19.24

OR – Odds ratio; CI – Confidence interval

Furthermore, the adjusted analysis performed using Poisson regression showed that lower schooling, being divorced and having low family income resulted in a higher prevalence of suicidal ideation, planning and attempt (Table 4).

Table 4. Adjusted analysis of sociodemographic variables with suicidal behavior during the COVID-19 pandemic

Variables	Ideation		Planning		Attempt	
	CI (95%)	p-value	CI (95%)	p-value	CI	p-value
Primary education	0.01-0.25	0.02	-	-	0.068-0.316	0.002
Secondary education	0.01-0.05	0.03	-	-	-	-
Divorced	-	-	0.32-0.38	0.02	-	-
Income of 1-2 MW	-	-	0.003-.132	0.04	-	-

OR – Odds ratio; CI – Confidence interval; MW -Minimum wage

Discussion

Even with scientific advances, the recognition and attention to the mental and behavioral repercussions imposed by the pandemic moment are constantly neglected, revealing the need for new studies favorable to the identification of associated factors, predictors and determinants for risk behaviors, among which suicide.[15]

As in other epidemiological projections for suicidal behavior, in this study, female, unemployed, single people with low family income prevailed, demonstrating the greater vulnerability of this population segment to the manifestation of episodes of self-inflicted violence.[16,17]

Despite the predominance of young adults, age variation showed an incidence of the condition among adolescents aged at least 13 years. Adolescence is considered an important risk factor for suicidal behavior, given the psychological, physical, mental and social changes, as well as extreme independence movements, conflicts and ambivalences, the search for the formation of personal identity, emotional instabilities and predisposition to use psychoactive substances.[18]

The predominance of suicide attempts may be related to different factors, such as conducting the study in a psychiatric emergency department, where cases with greater potential for seriousness are referred to; higher incidence of behavior in the general population during the pandemic; and weaknesses in the early identification of the risk that contribute to the occurrence of severe episodes.[19]

Exogenous intoxication, self-inflicted violence with sharp objects and hanging were the main means used in the suicide attempt, either by their

wide availability or ease of access, and the selection of these methods may reflect variations in gender and age group, the presence of mental disorder or previous attempts.[20]

Suicidal ideation was also significant, as in other studies that indicated exponential growth in the prevalence of thoughts of self-destruction, desires and attitudes with fatal intent, and they indicate reflections in the projections of post-pandemic behavior.[11,12]

As for psychic manifestations, common symptoms were identified during the progression of behavior, resulting mostly from the association with previous mental disorders or with social, economic and work stressors related to the pandemic and the structured measures for epidemiological prevention and control.[5]

In this context, the psychic alterations involved mostly symptoms of anxiety, depression, hopelessness and psychoses, which, when associated, represent indicators of mental suffering and greater risk for suicidal behavior.

Although no significant association was observed between anxiety and suicidal behavior, this manifestation is one of the most prevalent psychosomatic alterations in the general population. It is an adaptive response in the midst of an alert or threat signal, configuring as pathological when its level of activation or duration is disproportionate to the situation experienced, resulting in the impairment of physiological, mental, behavioral and cognitive functions.[21,22]

Depressive symptoms were also reported in another study that evaluated the impacts of the COVID-19 pandemic on mental health, indicating a high incidence of feelings of sadness, loss of interest and pleasure in activities of daily living, isolation, low self-esteem and changes in sleep and rest patterns.[23]

The history of mental disorder and psychiatric hospitalization represented the main factors associated with suicide attempt. Recognized as the main predictors of suicide, the presence of psychopathological comorbidities reflects the need for constant reassessments for therapeutic maintenance, risk screening, early identification of psychological changes and implementation of prevention and control measures.[24]

Therapeutic abandonment and irregular psychiatric treatment were identified in the same context and constitute frequent phenomena in the face of governmental responses imposed for epidemiological control of the pandemic. In this way, the implementation of social distancing and isolation measures may reflect on different care modalities, lead to limited access to health systems and contribute to the chronicity of mental disorders, the recurrence of crises and intensification of emotional reactions.[25]

Although studies evaluating the effects of the pandemic and social distancing measures on consumption of psychosocial substances are incipient, this factor was identified in 60.0% of records and is strongly associated with the development and intensification of mental and behavioral changes, potentiating episodes of depression and anxiety, as well as the risk of domestic and self-inflicted violence.[26]

Indicators related to consumption of psychoactive substances increased considerably for different social groups, age groups and genders as a result of social isolation measures, as well as the development and intensification of emotional reactions. Thus, substance dependence and abuse are characterized as a worldwide problem because they generate social, economic, physical, psychological and epidemiological impacts that can lead to the perception of loss of existential value and determine a greater risk for suicidal behavior.[27]

Situational crises identified in care records reflect the impacts of the pandemic on the population's wellbeing and mental health. In an integrative review study, it was found that favorable psychosocial effects to loss of productivity, worse perception of global health status and quality of life may arise during coping with coronavirus infections.[5]

In this study, situational crises were mostly economic repercussions resulting from the loss of income that affected 30.0% of the sample and from unemployment, in association with suicide ideation and attempt.

The financial impacts arising from the pandemic have been widely mentioned in different countries, making it one of the most frequent problems with the lockdown measures and suspension of non-essential services. As a result, workers had their

work activities interrupted without prior planning or economic reserves, which led to financial loss and the development of psychological symptoms capable of interfering with family functioning and mental health levels.[28]

Low schooling is also associated with suicidal behavior and constitutes a socioeconomic marker. It reflects the limitations in the Brazilian educational system for the inclusion of people with mental disorders and the psychological, behavioral and cognitive impairments caused by the mental disorder that make it difficult to access educational practices.[29,30]

In this study, the underreporting of suicide attempts was also noteworthy, and demonstrates failures in the establishment of epidemiological indicators and the structuring of programs for surveillance, case monitoring and prevention. In Brazil, underreporting of suicidal behavior still prevails as a major care challenge and requires the structuring of interventions that can measure the magnitude of the problem.[31]

In view of this scenario and the high incidence of suicidal behavior in the general population, the nursing team, usually the patient's first contact in the health system, plays an important role in the provision of comprehensiveness, embracement, prevention and strengthening of interpersonal bonds that can enhance adherence and response to therapy, and perform the adequate assessment and management in the face of risk situations.[32]

These results demonstrate the need for safe and effective care strategies for risk management, as well as the incorporation of technologies favorable to the identification of individual, biological, environmental, social, clinical and psychological predictors of suicide, leading to care planning, monitoring of cases and implementation of preventive measures.[13]

As a limitation, the study was conducted in only one emergency service in Teresina. However, the target institution of the study is a reference for the management of severe mental disorders and care for people at risk of suicide in the state. The nominal categorization of clinical manifestations such as anxiety, depressed mood and hopelessness also stands out. Although they were analyzed by Poisson Regression, these constitute constructs commonly evaluated by psychometric scales and represented by quantitative scores.

Conclusion

Suicidal behavior during the COVID-19 pandemic was expressed by suicide attempt, ideation and planning, prevailed in females with a mean age of 34.9 years and a history of previous hospitalizations, mental disorder and therapeutic abandonment. Psychiatric alterations involved symptoms of anxiety, depression, feelings of hopelessness, delusions and audiovisual hallucinations. The associated factors included psychoactive substances consumption, loss of income, previous hospitalization, lower schooling and low family income, which resulted in the greater risk for self-inflicted violence, reinforcing the need for effective and evidence-based public policies for early identification, implementation of prevention strategies and adequate management of risk states. New investigations are essential to measure the clinical conditions related to the risk of self-inflicted violence as psychological constructs.

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