



SUICIDAL IDEATION IN MEN DEPRIVED OF LIBERTY IN A PRISON UNIT IN THE STATE OF PARANÁ, BRAZIL*

IDEAÇÃO SUICIDA EM HOMENS PRIVADOS DE LIBERDADE EM UNIDADE PRISIONAL DO ESTADO DO PARANÁ, BRASIL*

IDEACIÓN SUICIDA EM HOBRENS PRIVADOS DE LIBERTAD EM UMA UNIDAD PRISIONAL DEL ESTADO DE PARANÁ, BRASIL

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ABSTRACT

Objectives: this study aims to analyze the factors associated with suicidal ideation throughout the lives of men deprived of liberty in a prison unit. **Methods:** a cross-sectional study was carried out in a prison unit in Paraná in 2022, involving 100 participants. **Results:** throughout their lives, 37.0% (n=37) of the participants reported suicidal ideation: 97.3% (n=36) expressed a desire to die; 100% (n=37) presented non-specific active ideation; 75.7% (n=28) had active ideation with some method (without a plan) and without the intention to act; and 62.2% (n=23) demonstrated active suicidal ideation with some intention to act, both without a specific plan, and with a specific plan and intention. Suicidal thoughts during incarceration were observed in 62.2% (n=23), and 52.2% (n=12) initiated during deprivation. Suicidal ideation was associated with suicidal ideation before and during deprivation; treatment for mental health conditions; and attempted suicide and attempted suicide. **Conclusions:** The frequency of suicidal ideation was similar before and during deprivation; among the ideations during deprivation, the largest proportion began during deprivation.

Keywords: Suicidal Ideation; Prisons; Prisoners; Men; Freedom; Mental Health; Nursing.

RESUMO

Objetivos: analisar os fatores associados à ideação suicida ao longo da vida em homens privados de liberdade em uma unidade prisional. **Métodos:** estudo transversal realizado em uma unidade prisional do Paraná em 2022, com 100 participantes. **Resultados:** ao longo da vida, 37,0% (n=37) dos participantes apresentaram ideação suicida: 97,3% (n=36) dos homens tiveram desejo de morrer; 100% (n=37) apresentaram ideação ativa não específica; 75,7% (n=28) tiveram ideação ativa com algum método (sem plano) e sem intenção de agir; e 62,2% (n=23) apresentaram ideação suicida ativa com alguma intenção de agir; sem plano específico, e ideação suicida ativa com plano específico e intenção. Pensamentos suicidas na privação foram observados em 62,2% (n=23), e 52,2% (n=12) iniciaram durante a privação. A ideação suicida apresentou associação com ideação suicida antes e durante a privação; tratamento para condições de saúde mental, tentativa efetiva e interrompida. **Conclusões:** a frequência da ideação suicida foi semelhante antes e durante a privação; dentre as ideias durante a privação, a maior parcela teve início na privação.

Palavras-chave: Ideação Suicida; Prisões; Prisioneiros; Homens; Liberdade; Saúde Mental; Enfermagem.

RESUMEN

Objetivos: analizar los factores asociados a la ideación suicida a lo largo de la vida en hombres privados de libertad en una unidad penitenciaria. **Métodos:** estudio transversal realizado en una unidad penitenciaria de Paraná en 2022, con 100 participantes. **Resultados:** a lo largo de la vida, el 37,0% (n=37) de los participantes presentó ideación suicida: el 97,3% (n=36) de los hombres tuvo deseo de morir; el 100% (n=37) mostró ideación activa no específica; el 75,7% (n=28) tuvo ideación activa con algún método (sin plan) y sin intención de actuar; y el 62,2% (n=23) presentó ideación suicida activa con alguna intención de actuar, sin plan específico, e ideación suicida activa con plan específico e intención. Los pensamientos suicidas durante la privación fueron observados en el 62,2% (n=23), y el 52,2% (n=12) comenzaron durante la privación. La ideación suicida mostró asociación con la ideación suicida antes y durante la privación; tratamiento para condiciones de salud mental, intento efectivo e frustrado. **Conclusiones:** la frecuencia de la ideación suicida fue similar antes y durante la privación; entre las ideaciones durante la privación, la mayor parte comenzó en la privación.

Palabras clave: Ideación Suicida; Prisiones; Prisioneros; Hombres; Libertad; Salud Mental; Enfermería.

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INTRODUCTION

Suicide has been present in all eras and cultures of humanity and remains a serious global health problem, with prospects of continued increases in epidemiological rates in subsequent years. This phenomenon affects all socioeconomic, ethnic, and age classes, affecting families and the community in general due to the suffering from the impact of the loss of loved ones, the economy, and the world of work. Also, it brings costs in health resources for the prevention, treatment, and rehabilitation of people who attempt to take their lives⁽¹⁾. These reasons include suicide as a topic that encompasses strong evidence of predictions for this act, such as suicidal ideation and behavior, and is a priority agenda for scientific research and health policies for all countries in the world⁽²⁾.

More than 800,000 people die by suicide worldwide each year. In Brazil, these numbers reach 12,000 and are a public health concern⁽¹⁾. Suicide is considered a lethal behavior that a person against himself/herself and can result from suicidal ideations and other behaviors. Thus, suicidal ideation is a psychosocial problem, characterized by thoughts of wanting to end one's life, and therefore considered a predictor of suicide^(3,4).

Suicidal ideation can be classified into five types of thoughts: desire to die; non-specific active suicidal thoughts; suicidal ideation with methods, without plans or intention to act; and suicidal ideation with intention to act, without a plan. However, the fifth type is the most serious, which is active suicidal ideation with a specific plan and intention to act⁽⁵⁾.

A study conducted with 137 people with mental disorders in a Psychosocial Care Center showed that 70.8% (n=97) of the participants presented non-specific active suicidal thoughts; 63.5% (n=87), active ideation with methods; 53.3% (n=73), active ideation with intention, but without a specific plan; and 40.1% (n=55) had the most severe form, with plan and the intention of suicide. The main aspects to bring suicidal thoughts involve the absence or fragility of social support, family conflicts, mental comorbidities, use of psychoactive substances, financial problems and experienced traumas⁽⁶⁾.

In the population in general, men deprived of liberty may be more prone to suicidal ideation and behavior, especially when they have had experiences of aggravation for such behavior before their deprivation of liberty. These records include those who are socially disadvantaged, victimized, and have a prison history, leading to the disintegration of social bonds, the psychological impact of living in prison, and mental health comorbidities⁽⁴⁾.

Currently, the number of people deprived of liberty in the prison system worldwide exceeds nine million. Brazil is the third country with the largest prison population, and the United States and China had the first and second places, respectively. Brazil has increased this number by 380% over two decades⁽⁷⁾.

According to the latest report from the National Criminal Information System, from January to June 2023, Brazil had 644,305 people deprived of liberty in closed regimes, and in Paraná, 36,164 people, of which 34,432 were male⁽⁸⁾.

The prison environment can trigger or aggravate health problems in people deprived of liberty, especially suicidal behavior, which is considered one of the main causes of death in this context. This can occur due to unsanitary conditions, inadequate lighting, overcrowding, traumatic experiences, isolation, and punishments. These aspects can cause or exacerbate psychological problems, frustrations, and vulnerability to victimization^(9,10).

A study based on 1,727 suicide records in the prison system showed that 91.5% (n=1,580) of the victims were men and 30.0% (n=474) presented suicidal ideation. The main related factors were a history of alcohol and other substance use, mental disorders, and having committed a crime in the last month. Other factors that contributed to suicidal ideation included history of mental health conditions, adaptation to the prison environment, fear of deprivation, contact with other prisoners and gangs⁽¹¹⁾.

In a study of 228 people deprived of liberty in a penitentiary in Minas Gerais, 23.7% (n=54) had suicidal ideation, 21.1% (n=48) began having suicidal thoughts while in prison, 31.3% (n=15) had these thoughts more than five times a day, and 32.5% (n=26) used controlled medications⁽¹²⁾. Considering the isolation of people deprived of liberty and the difficulty in moving them to other types of treatment, such as psychological care due to the reduced number of health and security professionals available, usually within the prison environment, the treatment option for suicidal ideation and behavior is limited to drug therapy⁽¹¹⁾.

The global scarcity of scientific publications that assess the intensity, frequency, and severity of suicidal ideation is another aspect to be considered, especially for the peculiarities of the population deprived of liberty and the prison environment^(11,12).

In this context, the relevance of studies on this topic with the population deprived of liberty and the provision of nursing care aimed at promoting and preventing suicidal ideation and behavior are supported by the United Nations Sustainable Development Goals and the 2030

Agenda, which aim to prevent suicide, especially in vulnerable populations. Their target 16.3 highlights to “Strengthen the rule of law and ensure access to justice for all, especially those in vulnerable situations”, and target 3.4.2, to “Suicide mortality rate”⁽²⁾.

OBJECTIVE

To analyze the factors associated with suicidal ideation throughout life in men deprived of liberty in a prison unit.

METHODS

This is an observational and cross-sectional study, guided by the STROBE tool, carried out from May to August 2022 in a prison unit in the State of Paraná.

Study population

At the beginning of data collection, the population comprised 700 convicted men or those awaiting trial. From this group, 100 of them participated in the study. The total number of participants was determined by the number of interviews that could be conducted during the period set by local management and the availability of prison officers to accompany the interviewers. The inclusion criterion specified that participants had to be men aged 18 or older. Individuals with cognitive deficits documented in their medical records, those suffering from infectious diseases, or those temporarily absent from the unit for treatment in other healthcare facilities during the collection period were excluded. A pilot test was conducted with five participants not included in the study.

Study protocol

The men were individually invited to participate in the presence of a prison officer to comply with the guidelines of the prison unit management. For recruitment, the invitation was made in the galleries where a prison officer was available to accompany the interview, as instructed by the unit management. The men were invited inside their cells, in the presence of a prison officer, and with the knowledge of the nursing team and the prison unit management.

The dependent variable examined was suicidal ideation throughout an individual's life, while the independent variables included sociodemographic factors (such as age, race, marital status, children, education, occupation, and family dynamics); mental health conditions (including diagnoses, treatment, use of medication, and

consumption of tobacco, alcohol, and other psychoactive substances); legal aspects (covering the duration of deprivation, reasons for deprivation, first instance of deprivation, age at first deprivation, number of instances of deprivation, number of individuals in the cell, and family history of deprivation); various facets of suicidal ideation (encompassing types, intensity, frequency, duration, controllability, reasons for refraining from suicide, motivations behind suicidal ideation, as well as ideation patterns before, during, and at the onset of deprivation of liberty, including the frequency of ideation during deprivation); along with instances of effective suicide attempts and interrupted attempts.

Data collection and organization

Data were collected from May to August 2022, using the Columbia-Suicide Severity Rating Scale (C-SSRS) instruments by Posner et al.⁽³⁾ and an instrument developed by the authors to gather information on sociodemographic, socioeconomic, clinical, and pharmacotherapeutic aspects. Complementary data on suicidal ideation and behaviors were also collected. Each interview took place in an office or ward, with a table and a chair for the interviewee and the interviewer, in the presence of a prison police officer who remained at a distance of approximately two meters, and the participants remained handcuffed.

Analysis of results and statistics

The data were coded and entered into an Excel® spreadsheet, with double entry. In the descriptive analysis, absolute and relative frequencies were used for categorical variables, and the interquartile range for continuous variables. In the inferential stage, the Prevalence Ratio (PR) was calculated as a measure of effect, with a 95% confidence interval (95%CI), of the dependent variable “active suicidal ideation with some method (no plan), without intention to act during life (yes/no)” concerning the independent variables, with a p-value <0.05 being considered significant. Then, an adjusted PR analysis of the stepwise forward type was performed with Poisson Regression between the dependent variable and those independent variables that presented a p-value <0.2 in the univariate analysis, considering p <0.05 significant with the Wald test. The software used was Stata, version 12 (StataCorp, College Station, United States).

Ethical aspects

The study followed national and international ethical guidelines, and the Research Ethics Committee of the

Federal University of Paraná approved it with the opinion attached to this submission. The Coronavirus prevention measures of the Paraná Penal Police Department and Resolution number 466/2012 were respected. This article is an excerpt from the thesis entitled "Suicidal ideation and behavior in men deprived of liberty in a prison unit in the State of Paraná" ("Ideação e comportamentos suicidas em homens privados de liberdade em uma unidade prisional do Estado do Paraná"). Free and informed consent was obtained from all individuals involved in the study through a written document.

RESULTS

This study had N=100 men deprived of liberty participating: 58.0% (n=58) were aged between 30 and 49 years, with a mean of 38.8 ± 13.1 years; 58.0% (n=58) had children; 44.0% (n=44) had incomplete elementary education; 55.0% (n=55) declared to be brown; 57.0% (n=57) were single; 56.0% (n=56) lived with their family before being deprived of liberty; and 52.0% (n=52) were employed in the period before being deprived of liberty.

Of the participants, 63.0% (n=63) had a diagnosis of mental health conditions, of which 52.4% (n=33) had a substance use disorder, and 65.1% (n=41) were undergoing treatment for mental health conditions, using medications for this condition. Regarding substance use, 71.0% (n=71) used tobacco, 85.0% (n=85) used alcohol; 65.0% (n=65) used other psychoactive substances (PAS), of which 64.6% (n=42) used cocaine.

Table 2 shows that 40.0% (n=40) of the men had been deprived of liberty for less than one year; 30.0% (n=30) had committed homicide; 61.0% (n=61) had previously experienced deprivation of liberty; 50.0% (n=50) had experienced their first deprivation of liberty between the ages of 18 and 30; 44.0% (n=44) had been deprived of liberty between two and four times; and 47.0% (n=47) were with four to six people in the cell. In addition, 30.0% (n=30) of the participants had a family history of deprivation of liberty.

Table 3 shows that 37.0% (n=37) of men had suicidal ideation during their lifetime: 97.3% (n=36) wanted to die; 100% (n=37) had non-specific active suicidal thoughts; 75.7% (n=28) had active ideation with some method (no plan) and no intention to act; 62.2% (n=23) had active suicidal ideation with some intention to act, no specific plan, and active suicidal ideation accompanied by a specific plan and intention.

Among those who had ideation (100%, n=37), 67.6% (n=25) presented the highest intensity, with scores

Table 1 - Distribution of mental conditions of men deprived of liberty and suicidal ideation. Paraná, 2022

Variables	Suicidal ideation			
	(N=100)	yes n (%)	no n (%)	(100%)
Mental health conditions				
Yes	63	21(33,3)	42 (66,7)	63,0
No	37	16 (43,2)	21(56,8)	37,0
	63 (N)			100(%)
Diagnosis of mental health conditions*				
PAS-related disorder	33	9 (27,3)	24 (72,7)	52,4
Schizophrenia	14	5 (35,7)	9 (64,3)	22,2
Others**	7	5 (71,4)	2 (28,6)	11,1
Psychopathy	5	4 (80,0)	1 (20,0)	7,9
Mood disorder	3	2 (66,7)	1 (33,3)	4,8
Depression	1	1 (100,0)	0 (0,0)	1,6
Treatment for mental health conditions				
Yes	41	24 (58,5)	17 (41,5)	65,1
No	57	12 (21,1)	45 (78,9)	33,3
Unknown	1	1 (100,0)	0 (0,0)	1,6
Medication use for mental health conditions				
Yes	41	24 (58,5)	17 (41,5)	65,1
No	57	12 (21,1)	45 (78,9)	33,3
Unknown	1	1 (100,0)	0 (0,0)	1,6
	(N=100)			(100%)
Tobacco use				
Yes	71	28 (39,4)	43 (60,6)	71,0
No	29	9 (31,0)	20 (69,0)	29,0
Alcohol use				
Yes	85	32 (37,6)	53 (62,4)	85,0
No	15	5 (33,3)	10 (66,7)	15,0
Use of other PAS				
Yes	65	28 (43,1)	37 (56,9)	65,0
No	35	9 (25,7)	26 (74,3)	35,0
PAS used				
Cocaine	42	21 (50,0)	21 (50,0)	64,6
Crack	5	2 (40,0)	3 (60,0)	7,7
Marihuana	12	2 (16,7)	10 (83,3)	18,5
Others***	5	3 (60,0)	2 (40,0)	7,7
Not answered	1	0 (0,0)	1 (100)	1,5

* Information collected from the patient's medical records and the nomenclature was maintained as it was recorded. ** Mild mental retardation, Psychosis not otherwise specified. *** Hallucinogens and inhalants.

between 4 and 5; 40.5% (n=15) reported frequency of suicidal thoughts many times a day; 48.6% (n=18) had thoughts lasting less than one minute; however, 27.0% (n=10) and 13.6% (n=5) had these thoughts for more than 8 hours and 4 to 8 hours, respectively. In addition,

Table 2 - Distribution of legal aspects of men deprived of liberty and suicidal ideation. Paraná, 2022

Variables	(N=100)	Suicidal Ideation		
		yes n (%)	no n (%)	(100%)
Time of deprivation of liberty				
Less than 1 year	40	13 (32,5)	27 (67,5)	40,0
From 1 to 2 years	33	11 (33,3)	22 (66,7)	33,0
From 3 to 8 years	20	10 (50,0)	10 (50,0)	20,0
More than 9 years	6	3 (50,0)	3 (50,0)	6,0
Unknown	1	0 (0,0)	1 (100)	1,0
Reason for deprivation of liberty				
Homicide	30	14 (46,7)	16 (53,3)	30,0
Theft, robbery, non-payment of child support	28	9 (32,1)	19 (67,9)	28,0
Sexual crimes	16	8 (50,0)	8 (50,0)	16,0
Fights	9	0 (0,0)	9 (100)	9,0
Drug possession and trafficking	8	5 (62,5)	3 (37,5)	8,0
Others&	8	0 (0,0)	8 (100)	8,0
Not answered	1	0 (0,0)	1 (100)	1,0
First deprivation of liberty				
Yes	39	15 (38,5)	24 (61,5)	39,0
No	61	22 (36,1)	39 (63,9)	61,0
Age of first deprivation				
<18 years old	19	9 (47,4)	10 (52,6)	19,0
18 to 30 years old	50	18 (36,0)	32 (64,0)	50,0
31 to 75 years old	28	10 (35,7)	18 (64,3)	28,0
Not answered	3	0 (0,0)	3 (100)	3,0
Amount of deprivation of liberty				
1	18	8 (44,4)	10 (55,6)	18,0
2 to 4 times	44	13 (29,5)	31 (70,5)	44,0
5 to 10 times	13	8 (61,5)	5 (38,5)	13,0
> 10 times	4	1 (25,0)	3 (75,0)	4,0
Unknown	21	7 (33,3)	14 (66,7)	21,0
Number of people in the cell				
1 to 3 people	25	13 (52,0)	12 (48,0)	25,0
4 to 6 people	47	14 (29,8)	33 (70,2)	47,0
7 to 14 people	23	8 (34,7)	15 (65,3)	23,0
Not answered	5	2 (40,0)	3 (60,0)	5,0
Family history of deprivation				
Yes	30	15 (50,0)	15 (50,0)	30,0
No	69	21 (30,4)	48 (69,6)	69,0
Not answered	1	1 (100)	0 (0,0)	1,0

* Kidnapping and physical assault.

48.6% (n=18) were able to control their thoughts easily; 62.1% (n=23) reported some reason that certainly prevented them from committing suicide; and 64.9% (n=24) stated that the reason for committing suicide would certainly be to end the suffering.

Regarding the occurrence of suicidal ideation, 64.9% (n=24) had it before the deprivation of liberty, 62.2% (n=23) during the deprivation. Among them, 52.2% (n=12) began to have these thoughts during the deprivation, with 69.2% (n=16) thinking five or more times about committing suicide during the deprivation.

Active suicidal ideation with some method (no plan) and no intention to act showed a significant association with suicidal ideation before deprivation of liberty, presenting a PR of 6.68 (3.02-14.7) with $p < 0.000$, suicidal ideation during deprivation of liberty with a PR of 8.36 (3.68-19.0) with $p < 0.000$, treatment for mental health conditions with a PR of 3.97 (1.67-9.39) with $p < 0.002$ and use of medication for mental health conditions with a PR of 4.58 (1.84-11.4) with $p < 0.001$, effective suicide attempt in life with a PR of 10.43 (4.23-25.7) with $p < 0.000$ and interrupted attempt in life with a PR of 5 (2.31-10.8) with $p < 0.000$ (Table 4). In the adjusted analysis, only the variable actual suicide attempt in life maintained the association, while the others remained as adjustment variables of the multiple model.

DISCUSSION

In this study, the profile of men deprived of liberty - single, with a mean age of 38.8 ± 13.1 years, mixed race, and with children - is similar to other national and international studies^(11,13-16). The socioeconomic data, in which the majority of men had incomplete elementary education, were also similar. The only difference was in the employment status because a large proportion were employed in this study^(11,12-20).

Most participants had mental health conditions, with PAS use as the most frequent one, followed by schizophrenia, and cocaine as the most commonly used substance. A study of 1,203 men deprived of liberty showed that 44.8% (n=539) had some mental health condition and 35.1% (n=422) used PAS, with both conditions being associated with suicidal ideation. Some mental health conditions can increase impulsive, aggressive, and despondent behaviors, contributing to the emergence of suicidal ideation and behaviors⁽⁴⁾.

In this study, most of the deprived men used tobacco, starting early in childhood and adolescence. This was similar to other studies that showed a higher frequency

Table 3 - Suicidal ideation in men, before and during deprivation of liberty. Paraná, 2022

Variables	(N=100)	(100%)
Suicidal Ideation		
Yes	37	37,0
No	63	63,0
	(N=37)	(100%)
Desire to die		
Yes	36	97,3
No	1	2,7
Non-specific active suicidal thoughts		
Yes	37	100,0
No	0	0,0
Active suicidal ideation with some method (no plan) without intention to act		
Yes	28	75,7
No	9	24,3
Active suicidal ideation with some intent to act, without a specific plan		
Yes	23	62,2
No	77	37,8
Active suicidal ideation with specific plan and intent		
Yes	23	62,2
No	77	37,8
Intensity of ideation		
4-5	25	67,6
2-3	12	32,4
1	0	0,0
Frequency		
< Once a week	14	37,8
Once a week	3	8,1
2 to 5 times a week	1	2,7
Every day	2	5,5
Several times a day	15	40,5
Every day	2	5,4
Duration		
Less than a minute	18	48,6
> 8 hours	10	27,0
4 to 8 hours	5	13,6
Less than an hour	2	5,4
1 to 4 hours	2	5,4
Controllability		
Controlling thoughts with ease	18	48,6
Cannot control thoughts	8	21,6
Controlling thoughts with little difficulty	5	13,6
Thought control with difficulty	5	13,6
Thought control with great difficulty	1	2,6

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Variables	(N=100)	(100%)
Reasons not to commit suicide		
These reasons certainly prevented him/her	23	62,1
These reasons certainly did not stop him/her	9	24,3
These reasons probably prevented him/her	5	13,6
Not sure if these reasons stopped you?	0	0,0
These reasons probably didn't stop him/her	0	0,0
Reasons for ideation		
Definitely to end the suffering	24	64,9
Above all to end suffering	7	18,9
Definitely to get attention, get revenge or provoke a reaction from other people.	6	16,2
Mainly to attract attention, get revenge or provoke a reaction from other people.	0	0,0
Whether to attract attention, take revenge or provoke a reaction from other people or to end suffering	0	0,0
Suicidal ideation before deprivation of liberty		
Yes	24	64,9
No	13	35,1
Suicidal ideation during deprivation of liberty		
Yes	23	62,2
No	14	37,8
	N=23	100%
Suicidal ideation beginning during deprivation of liberty		
Yes	12	52,2
No	11	47,8
Number of times you had suicidal ideation during your deprivation of liberty		
Five or more times	16	69,6
Once	5	21,7
Four times	2	8,7
Three times	0	0,0

of use during life and deprivation of liberty⁽¹³⁻¹⁵⁾. In addition, an international research study with people who used tobacco before deprivation of liberty showed a risk of suicidal behavior, which may be due to withdrawal symptoms, considering that in some places this use is restricted⁽¹⁵⁾.

Most participants used alcohol and other psychoactive substances. However, a study conducted with 288 people deprived of liberty in Ethiopia in 2020, to assess the prevalence and factors associated with suicidal behavior, showed that 46.9% (n=135) had used psychoactive substances and 24.3% (n=70) had used alcohol⁽¹⁴⁾. Another study with people deprived of liberty who died by suicide in French prisons in 2017 and 2018 showed that 37.9% (n=74) used marijuana and alcohol. Substance use

Table 4 - Analysis of the Prevalence Ratio (PR) of men deprived of liberty associated with active ideation with some method (without a plan) without intention to act. Paraná, Brazil, 2022 Analysis of the Prevalence Ratio (PR) of men deprived of liberty associated with active ideation with some method (without a plan) without intention to act. Paraná, Brazil, 2022

Suicidal Ideation (IS)	PRb (CI95%)	PRa (CI95%)
Suicidal ideation before deprivation		
No (IS/yes: n = 13)	1 (reference)	1 (reference)
Yes (IS/yes: n = 24)	6.68 (3.02 – 14.77)***	3.39 (1.07 – 10.75)*
Suicidal ideation during deprivation		
No (IS/yes: n = 14)	1 (reference)	1 (reference)
Yes (IS/yes: n = 23)	8.36 (3.68 – 19)***	3.14 (1.12 – 8.82)*
Treatment for mental health conditions		
No (IS/yes: n = 12)	1 (reference)	1 (reference)
Yes (IS/yes: n = 24)	3.97 (1.67 – 9.36) **	0.58 (0.06 – 5.11)
Medication use for mental health conditions		
No (IS/yes: n = 12)	1 (reference)	1 (reference)
Yes (IS/yes: n = 24)	4.58 (1.84 – 11.41)**	1.84 (0.2 – 16.8)
Actual suicide attempt in life		
No (IS/yes: n = 12)	1 (reference)	1 (reference)
Yes (IS/yes: n = 23)	10.43 (4.23 – 25.73)***	4.16 (1.13 – 15.29)*
Interrupted attempt at life		
No (IS/yes: n = 21)	1 (reference)	1 (reference)
Yes (IS/yes: n = 10)	5 (2.31 – 10.83)***	0.68 (0.25 – 12)

PR^b: Crude prevalence ratio; PR^a: Adjusted prevalence ratio; CI95%: 95% confidence interval; *: p-value < 0,05; **: p-value < 0,005; ***: p-value < 0,0005.

can generate mood swings, aggression, and impulsivity, aspects that can contribute to impulsive suicidal behavior, with or without suicidal ideation⁽¹³⁾.

Most participants in this study who had mental health conditions were undergoing treatment and using medication. These variables were associated with suicidal ideation throughout life. This result is in line with a study conducted in a penitentiary in France, in which 57.4% (n=112) of the 235 men who committed suicide were undergoing mental health treatment and using psychotropic drugs. People undergoing mental health treatment may have a history of psychological distress, as well as mental comorbidities, culminating in suicidal thoughts and behaviors⁽¹³⁾.

It is important to note that some factors within the prison environment can influence the mental health treatment of people deprived of liberty, since carrying out the procedures requires authorization and the presence of the prison officer on duty, who may sometimes be unavailable or take a long time to be available. Also, the lack of standardized care protocols for this specific population, the

absence of multidisciplinary health teams, and material resources can aggravate this situation^(21,22).

Medication therapy in mental health is a strategy frequently used in prison settings. It is administered in the cells for security reasons to avoid and reduce the movement of people deprived of their liberty⁽¹¹⁾. Another aspect to be considered is the start of medication use in the prison setting, as some antidepressants can have suicidal ideation as a side effect, making monitoring necessary to assess dose regulation or change of medication⁽²³⁾.

However, deprivation of liberty may lead to the abrupt discontinuation of medication for those who were undergoing treatment before detention. Continuous use of medication for mental health conditions, such as antidepressants, may present signs and symptoms of chemical dependency. Therefore, discontinuation may intensify withdrawal symptoms and contribute to manifestations of suicidal ideation⁽²³⁾.

Two-fifths of the participants had been deprived of liberty for less than a year. A study with the same population showed that the chance of suicide in the first week of deprivation is 6.4 times higher, a fact that may be due to adaptation to the prison environment, isolation, and insecurity related to procedural issues⁽¹³⁾.

Homicide was the main reason for the participants' detention, a finding also observed in a study with data from people who committed suicide in the French prison system⁽¹⁵⁾. However, unlike the SISDEPEN data in 2023, in Brazil, 51.3% (n=158,228) of deprivations of liberty occurred due to drug trafficking⁽⁸⁾. Suicidal ideation may be more prevalent in cases of violent crimes, such as homicide and sexual crimes, due to guilt feelings, memories of the episode, and issues of victimization in the prison environment⁽¹⁴⁾.

Most of the men in this study were repeat offenders of deprivation of liberty, and the most frequent age group was between 18 and 30 years. These data are similar to those found in a study with 195 individuals who died by suicide, where 51.1% (n=99) were again deprived of liberty. In this sense, prolonged periods of deprivation of liberty may act as a protective factor against suicidal ideation, since individuals are familiar with this type of environment, in addition to establishing routines and relationships with the people there. This is corroborated by a study that showed that repeat offenders of deprivation had less suicidal ideation compared to those in their first deprivation^(12,14).

In this study, four to six people shared the same cell, and the bonds created with cellmates can be a protective factor against suicidal ideation⁽¹⁸⁾. A study with 235 men

deprived of liberty showed that 71.0% of them attempted suicide after the release of a cellmate⁽¹⁴⁾. However, the effects of overcrowding, disputes, and lack of privacy can increase psychological suffering^(12,14,24).

More than a quarter of the participants reported a family history of deprivation of liberty. A study with 77 children of detained men, aged between 2 and 6 years, showed that 22.0% (n=17) remembered the moment their father was arrested, generating feelings of insecurity and frustration. The absence of parents or caregivers due to the rupture of bonds, due to deprivation of liberty, affects the mental health of these children in the long term, causing discouragement, insecurity, and frustration in the face of painful memories from childhood and adolescence⁽²⁵⁾.

Less than half of the participants had a desire to die or nonspecific suicidal thoughts throughout their lives. A study of people undergoing mental health treatment showed that 81.8% (n=112) had a desire to die. This thought is considered passive suicidal ideation, but increased frequency and intensity increase its severity and can evolve into active ideation with plans and methods⁽⁶⁾. The more elaborate the ideation, the greater its severity as exemplified by having a method to attempt suicide (exogenous intoxication, precipitation, hanging, and other forms), or a defined plan, such as place, day, and time for the action^(3,6,24).

The majority of participants exhibited active suicidal ideation with some method (without a specific plan) and without the intention to act, as well as active suicidal ideation with some intention to act, but lacking a detailed plan. National studies support these findings, identifying such behaviors as significant predictors of suicidal actions^(3,6,24). In this context, the presence of active suicidal ideation with some method (without a plan) and without intention to act was linked to prior suicidal ideation before experiencing deprivation of liberty. This suggests that the history of suicidal ideation before incarceration may be influenced by existing mental health comorbidities, involvement in violent offenses, and issues related to criminal organizations, all of which can contribute to feelings of fear and vulnerability^(3,6).

In this study, among the participants who presented suicidal ideation, the most intense score established by the C-SSRS, ranging from 4 to 5, was evidenced in most of them. This score is similar to national and international studies that used the same instrument^(5,6,24). An international study conducted with 804 people treated at an emergency unit for attempted suicide associated this variable with more intense suicidal ideation (OR 1.08;

95% CI 1.03–1.12)⁽²⁴⁾. The use of instruments that assess the intensity, frequency, and severity of suicidal ideation, such as the C-SSRS, allows for the rapid identification of the risk for suicidal behavior, enabling preventive interventions^(6,24).

The greater the frequency and duration of suicidal ideation, the greater the risk of suicidal behavior⁽¹²⁾. In this study, most participants who presented suicidal ideation had suicidal thoughts occurring many times a day and lasting more than 8 hours, ranging from 4 to 8 hours, 1 to 4 hours, and even less than one hour, respectively. In another study that used the same data collection instrument with people who presented substance-related disorders, 35.8% (n=40) of the 112 participants who presented suicidal ideation had thoughts many times a day, and 49.9% (n=56) lasted up to eight hours or more⁽⁶⁾. The extension of the duration of suicidal ideation during deprivation may occur due to idle time inside the cell, peculiarities of the environment, and the rupture of family ties^(24,25).

Most participants reported autonomy in controlling suicidal ideation. Some aspects may be protective, preventing suicidal behavior, such as fear of dying, family support, connection to a religion or beliefs, and seeking care in health services, among others⁽⁶⁾. Another study in a prison environment identified other protective factors such as involvement in activities inside the cell, cleaning and organization, receiving visits, being in a cell under intense surveillance, and social services in the institution. The social services are essential, especially for support in mediating communication with family members, asking the family to provide medication not provided by the State. This support network facilitates the relief of stressors within the prison environment, contributing to the control of suicidal thoughts⁽¹⁴⁾.

The desire to suppress suffering was the main reason that triggered suicidal ideation in participants. This reason may be multifactorial, encompassing clinical aspects, loss of family members, economic problems, and negative situations experienced throughout life^(12,14).

In this study, more than half of the men who had suicidal ideation during deprivation initiated this ideation during deprivation. In a study of individuals deprived of liberty, 21.1% initiated these thoughts during deprivation⁽¹²⁾. The authors considered that suicidal ideation tends to be more frequent in individuals deprived of liberty, compared to the general population. Adaptation to the prison environment, problems with cellmates, reduced visits, and uncertainty about conviction or release may contribute to these thoughts^(12,14,15).

A study conducted with 288 people deprived of liberty in Ethiopia showed that 12.5% (n=36) had suicidal ideation, 7.6% (n=22) had plans to take their life, and 8.3% (n=24) had attempted suicide⁽¹⁴⁾. During deprivation, ideation may be frequent due to the uncertainty of judicial processes for freedom, loss of family ties, reduced visits received, and problems with colleagues in the cell⁽¹²⁾.

In this study, there was an association between non-lifetime suicidal ideation and actual and interrupted suicide attempts. In another study conducted in an African country on suicidal behaviors with 288 people deprived of liberty, a quarter of the sample presented suicidal ideation with plans followed by actual attempts⁽¹⁵⁾. Another study, with data from 195 people who died by suicide in French prisons, revealed that, in the week before the suicide, 17.4% (n=34) presented suicidal ideation⁽¹⁴⁾. Suicidal ideation with a plan and intention to act is close to more serious suicidal behaviors, such as an actual attempt⁽¹³⁾.

Suicidal ideation is a risk factor for successful and interrupted suicide attempts. Therefore, other factors such as brain injuries, violence, non-suicidal self-harm, childhood problems, trauma, substance abuse, and certain mental disorders may increase the risk of attempted suicide among people deprived of liberty with a history of suicidal ideation⁽⁴⁾.

In this study, the involvement of individuals deprived of liberty fulfilled the requirements of the research field, necessitating the establishment of a non-probabilistic sample. Recruitment was conducted based on the daily availability of the security team to accompany the interviewer during the invitation to participate. The requirement for police accompaniment during the interviews may have hindered the accuracy and completeness of the information provided by the participants. Prior to direct contact with the individuals deprived of liberty, the prison officer was obligated to adhere to various security measures. This posed a limitation, as navigating within this environment demands safe mobilization to mitigate risks for all parties involved. Additionally, the cross-sectional design of the study may have affected the participants' ability to fully recount their experiences at a specific moment in time. Another limiting factor pertains to the sensitive nature of the research topic, which could evoke distressing memories and lead to psychological discomfort. Consequently, interviewers were instructed to remain vigilant for any expressions of feelings and attitudes stemming from participants' reflections, particularly if any comments suggested a risk of suicide. In such cases, interviewers were advised to promptly halt the interview and notify the nursing team within the prison unit.

CONCLUSIONS

We conclude that the frequency of suicidal ideation throughout the lives of the participants in this study was similar before and during deprivation. However, the largest proportion of the ideations during deprivation began during this period. In this sense, health professionals must pay attention to the presence of suicidal ideation and behaviors that may precede suicide.

In this study, the main factors associated with active ideation with some method (no plan) and no intention to act during life were suicidal ideation before and during deprivation, actual and interrupted suicide attempt, use of medication for mental health conditions, and treatment for mental health conditions.

Knowledge of the factors associated with suicidal ideation in the admission and permanence of men deprived of liberty can contribute to the organization and provision of nursing care in the prevention of suicidal ideation and behavior, considering the uniqueness of this researched, stigmatized, and constantly growing population.

This study contributes to reducing the gap in scientific production on suicidal ideation and behaviors exclusively in men deprived of liberty in Brazil, considering the scarcity of studies on this topic in prison units, due to access restrictions to these places, which are maximum security units.

REFERENCES

1. World Health Organization (WHO). Suicide WorldWide in 2019: global health estimates [Internet]. Geneva: World Health Organization; 2021 [cited 2024 Jan 06]. Available from: <https://www.who.int/publications/i/item/9789240026643>
2. Organização das Nações Unidas (ONU). Transformando o nosso mundo: a agenda 2030 para o desenvolvimento sustentável. Resolução A/RES/70/1 [Internet]. Rio de Janeiro: Centro de Informação das Nações Unidas para o Brasil (UNIC Rio); 2015 [cited 2023 Nov 25]. Available from: <https://brasil.un.org/sites/default/files/2020-09/agenda2030-pt-br.pdf>
3. Posner K, Brown GK, Stanley B, Brent DA, Yershova K, Oquendo MA, et al. The Columbia–Suicide Severity Rating Scale: initial validity and internal consistency findings from three multisite studies with adolescents and adults. *Am J Psychiatr* [Internet]. 2011 [cited 2024 Aug 19]; 168(12):1266-77. Available from: <http://dx.doi.org/10.1176/appi.ajp.2011.10111704>
4. Favril L, Connor ORC, Hawton K, Laenen FV. Factors associated with the transition from suicidal ideation to suicide attempt in prison. *Eur Psychiatry* [Internet]. 2020 [cited 2024 Aug 19]; 63(1):e101. Available from: <https://doi.org/10.1192/j.eurpsy.2020.101>
5. Posner K, Oquendo MA, Gould M, Stanley B, Davies M. Columbia Classification Algorithm of Suicide Assessment (C-CASA): Classification of Suicidal Events in the FDA's Pediatric Suicidal Risk Analysis of Antidepressants. *Am J Psychiatry* [Internet]. 2007 [cited 2024 Jan 07]; 164:1035-43. Available from: <https://psychiatryonline.org/doi/full/10.1176/ajp.2007.164.7.1035>

6. Vale CCF, Ferreira ACZ, Capistrano FC, Kaled M, Maftum MA, Palm RDCM. Ideação suicida em pacientes com transtornos relacionados a substâncias. *SMAD Rev Eletrônica Saúde Mental Alcool Drog* [Internet]. 2023[cited 2024 Jan 07];19(1):70-1. Available from: <https://www.revistas.usp.br/smad/article/view/188538>
7. Ministério da Justiça e Segurança Pública (BR). Levantamento Nacional de Informações Penitenciárias (Atualização). Brasília: DEPEN; 2019 [cited 2023 Dec 10]. Available from: <https://dados.mj.gov.br/dataset/infopen-levantamento-nacional-de-informacoes-penitenciarias>
8. Secretaria Nacional de Políticas Penais (BR). Dados estatísticos do sistema penitenciário do período de janeiro a junho de 2023. Brasília: SISDEPEN; 2023 [cited 2023 Dec 12]. Available from: <https://www.gov.br/senappen/pt-br/servicos/sisdepen>
9. Shepherd SM, Spivak B, Arabena K, Yin P Identifying the prevalence and predictors of suicidal behaviours for indigenous males in custody. *BMC Psychiatry* [Internet]. 2018 [cited 2023 Dec 16];18:1159. Available from: <https://bmcpubhealth.biomedcentral.com/articles/10.1186/s12889-018-6074-5>
10. Oliveira WF, Damas FB. Saúde e atenção psicossocial em prisões: um olhar sobre o sistema prisional brasileiro com base em um estudo em Santa Catarina. São Paulo: Hucitec; 2016. 113 p.
11. Choi NG, DiNitto DM, Marti CN. Suicide decedents in correctional settings: mental health treatment for suicidal ideation, plans, and/or attempts. *J Correct Health Care* [Internet]. 2019[cited 2024 Oct 16];25(1):70-3. Available from: <https://www.liebertpub.com/doi/10.1177/1078345818819500>
12. Ranuzi C, Santos TG, Araujo APMC, Rodrigues LR. Suicidal thinking, depression, and religiosity in a freedom-deprived population. *Rev Latino-Am Enferm* [Internet]. 2020 [cited 2024 Oct 05];28:e3368. Available from: <https://doi.org/10.1590/1518-8345.3713.3368>
13. Vanhaesebrouck A, Tostivint A, Lefèvre T, Melchior M, Khiredine-Medouni I, Chee CC. Characteristics of persons who died by suicide in prison in France: 2017–2018. *BMC Psychiatry* [Internet]. 2022 [cited 2025 Jan 20];22:11. Available from: <https://bmcp psychiatry.biomedcentral.com/articles/10.1186/s12888-021-03653-w>
14. Anbesaw T, Tsegaw M, Endra A. Suicidal behavior and associated factors among prisoners at Dessie town correctional institution, Dessie, Ethiopia. *BMC Psychiatry* [Internet]. 2022 [cited 2025 Jan 20];22:656. Available from: <https://doi.org/10.1186/s12888-022-04306-2>
15. Ayhan G, Arnal R, Basurko C, About V, Pastre A, Pinganaud E, et al. Suicide risk among prisoners in French Guiana: prevalence and predictive factors. *BMC Psychiatry*. 2017 [cited 2025 Jan 20];17:156. Available from: <https://doi.org/10.1186/s12888-017-1320-4>
16. Minayo MCS, Constantino P. Deserdados sociais: condições de vida e saúde dos presos do estado do Rio de Janeiro. Rio de Janeiro: Fiocruz; 2015. 352p.
17. Ryland H, Gould C, McGeorge T, Hawton K, Fazel S. Predicting self-harm in prisoners: Risk factors and a prognostic model in a cohort of 542 prison entrants. *Eur Psychiatry* [Internet]. 2020 [cited 2025 Jan 20];63(1):e42. Available from: <https://doi.org/10.1192/j.eurpsy.2020.40>
18. Ramos AI, Sinski KC, Palombit MR, Cruz E, Pitilin EB, Léo MMF, et al. Factors associated with high blood pressure and stress in men deprived of liberty. *Rev Bras Enferm* [Internet]. 2022 [cited 2025 Jan 20];75(4):e20210299. Available from: <https://doi.org/10.1590/0034-7167-2021-0299>
19. Pedrosa TMM, Bispo JF, Cezário LA, Silva CB, Melo AMA, Belo FMF, et al. Perfil sociodemográfico de homens e mulheres privados de liberdade no nordeste do Brasil: um estudo comparativo. *IJDR Int J Dev Res* [Internet]. 2020 [cited 2025 Jan 20]; 10(10):41713-20. Available from: https://www.ijdrjournal.com/sites/default/files/issue-pdf/20284_0.pdf
20. Lopes AMS, Caruso SR, Higa EFR, Gomes MF, Marin MJS, Lazarini CA. Idosos privados de liberdade: perfil de saúde e criminal. *Rev Kairós* [Internet]. 2022 [cited 2025 Jan 20];25(1):73-91. Available from: <https://revistas.pucsp.br/index.php/kairos/article/view/47360>
21. Furtado AE, Oliveira MM, Herreira LF, Silveira KL, Camargo PO, Cunha KF, et al. Mental health of women in deprivation of liberty: their perception. *Res Soc Dev* [Internet]. 2021[cited 2025 Jan 20];10:11e398101119820. Available from: <https://rsdjournal.org/index.php/rsd/article/view/19820>
22. Rossetto M, Alves CGR, Drechsler G, Kuerten LF, Souza RM de, Batista J d'Arc L. Olhar profissional no atendimento em saúde às pessoas privadas de liberdade: revisão integrativa. *Trab Educ Saúde* [Internet]. 2022 [cited 2024 Jan 04];20:e00909197. Available from: <https://doi.org/10.1590/1981-7746-ojs909>
23. Santos PRP, Paula SP, Carvalho CR. O uso de antidepressivos e sua possível influência na manifestação de comportamento suicida. *Rev JRG Estud Acad* [Internet]. 2020 [cited 2024 Jan 04];3(7):2595-61. Available from: <https://revistajrg.com/index.php/jrg/article/view/93>
24. Ferreira ACZ, Capistrano FC, Kaled M, Maftum MA, Kalinke LP, Palm RDC, Miasso AI. Tentativa de suicídio por pessoas com transtornos relacionados ao uso de substâncias em tratamento. *REME Rev Min Enferm* [Internet]. 2022 [cited 2024 Jan 04];26:e-1432. Available from: <https://periodicos.ufmg.br/index.php/reme/article/view/38798/30066>
25. Poehlmann-Tynan J, Burnson C, Runion H, Weymouth LA. Attachment in young children with incarcerated fathers. *Dev Psychopathol* [Internet]. 2017 [cited 2024 Jan 04];29(2):389-404. Available from: <https://doi.org/10.1017/S0954579417000062>