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Prevalence and factors associated with anxiety and depressive symptoms in women deprived of liberty in Juiz de Fora-MG, Brazil

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Abstract *Psychological distress and developing mental disorders in prisons are globally recognized public health issues. This study aimed to identify the prevalence of these symptoms and associated factors in 99 women over 18 years of age in the provisional, closed, and semi-open regimes in Juiz de Fora-MG, Brazil. This cross-sectional census study collected data face-to-face through a semi-structured and multidimensional questionnaire. We assessed outcomes using the Patient Health Questionnaire-4 (PHQ-4). We built a theoretical determination model with three hierarchical blocks for the association analysis. We estimated crude prevalence ratios using the chi-square test and adjusted for each other within each block (p≤0.20). We adopted p≤0.05 for the final Poisson regression model with robust variance. The prevalence of anxiety and depressive symptoms was 75.8% (95%CI 66.1%-83.8%) and 65.7% (95%CI 55.4%-74.9%), respectively. In the final model, anxiety symptoms were associated with depressive symptoms. On the other hand, depressive symptoms were associated with the 20-29 years age group and anxiety symptoms. We identified a prevalence of the outcomes in more than half of the participants, emphasizing the inter-association between them.*

Key words *Prisons, Women, Health surveys, Mental Disorders*

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Introduction

Deprivation of liberty is the mainstream public security strategy for people convicted of certain crime types. It isolates individuals dangerous to society and aims to prevent new crimes, with a commitment to the social rehabilitation of persons deprived of liberty (PDL)[1]. However, what is observed today in Brazilian penal establishments, in general, is the violation of human rights. Prison units are overcrowded, with unfavorable housing conditions, substandard physical spaces, unhealthy conditions, low access to health care, lack of specialized human resources, and moral, physical, and symbolic violence and abuse[2-4].

Currently, around 11 million people live in deprivation of liberty globally, and in 2021, 54% of 223 countries with the information contained in the World Prison Brief[5] database have an occupancy rate above 100%. As of December 2020, Brazil had more than 668,000 people serving deprivation of liberty sentences, of which almost 29,000 were women (4.29%)[6]. According to 2017 data on the female population deprived of liberty in the country, this segment ranked fourth in absolute numbers and third in terms of imprisonment, with an exorbitant increase in female incarceration of 656% between the early 2000s and 2016[7].

This public comprises primarily black, poor, with low professional qualifications, and unemployed women, sometimes from the suburban areas[3,8,9]. Since before serving a sentence, these women were already affected by inequalities that adversely impacted their health, which could deteriorate during their passage through the prison system, experiencing difficulties in accessing and being included in the Health Care Network (RAS)[10] satisfactorily[3]. Thus, the set of elements is a driving force for the aggravation of pre-existing health conditions and the triggering of new problems.

Psychological distress and developing mental disorders within the prison system are public health issues recognized worldwide[11]. Compared to the general population, the population deprived of liberty has worse mental health quality and indicators regarding mental disorders[11,12]. Anxiety and depressive disorders[3,9] are among the most prevalent in the female public serving a sentence.

In deprivation of liberty environments, the prevalence of depression can be up to six times higher than in the general population in low- and middle-income countries[12]. Evidence shows that the backdrop is worse for women than men[3], highlighting the importance of presenting gender-stratified results. The prevalence of depressive disorders in incarcerated women ranges from 21% to 59.4%[13-16] and that of anxiety disorders from 19.1% to 59.4%[13,15,17,18].

The impact on the mental health of women deprived of their liberty can harm life after serving a sentence, with a diagnosis of mental disorder, onset or recurrence of the drug use habit and trauma[19,20]. It is noteworthy that due to the COVID-19 pandemic, the prison system gains new contours regarding mental illness, with an increasing care demand, psychological distress due to the social impacts of the disease, and weakened family ties[9], enhancing already existing health inequalities[8,21].

Despite this context, there is still a lack of recent literature in the last five years exclusively investigating the female population deprived of liberty for anxiety or depressive disorders[12], listing the associated factors. On the other hand, mixed studies with published PDLs sometimes do not provide data broken down by gender. A review study by Ribeiro and Deus[3] points to essential gaps in the health and disease process between women and men in the context in question.

Given the above, this study is essential, as it articulates a potential gap in the field of knowledge to the use of a practical, low-cost, and reliable instrument for surveying the prevalence of anxiety and depressive symptoms and associated factors in women deprived of their liberty in Juiz de Fora-MG, Brazil.

Methods

This cross-sectional epidemiological study was conducted from a census with 99 female inmates, aged at least 18 years, in the provisional, closed, and semi-open regimes, of the Eliane Betti Female Annex of the José Edson Cavalieri Penitentiary, in Juiz de Fora, Minas Gerais, Brazil.

Juiz de Fora is part of the Zona da Mata Mineira region, southeast of the state of Minas Gerais. In 2019, it had an estimated population of more than 568 thousand inhabitants[22], and until December of that year, almost 2,500 people were deprived of their liberty (approximately 0.5% of the population), and 5.4% of these people were females[6].

The city is the seat of the Fourth Integrated Public Security Region (RISP) among 17 in the state and includes 86 municipalities. It has four

penal establishments, one being a shelter, a relocation center for the prison system, and two penitentiaries[6]. Notably, the municipality did not adhere to the National Policy for Comprehensive Health Care of Persons Deprived of Liberty in the Prison System (PNAISP)[23], reorganizing care for incarcerated people and establishing each basic prison health unit as a point of care for the Health Care Network. Thus, a minimum team is responsible for Primary Health Care (PHC) in penitentiaries, as provided in the National Health Plan in the Penitentiary System (PNSSP)[24].

The data derived from the survey "Living and health conditions of women deprived of their liberty in Juiz de Fora-MG", approved by the State Prison Administration Secretariat (SEI File 1450.01.0006361/2019-14), with the consent of the penal establishment's general director notified under Circular N° 468/2019/SEAP/SUSEP, and by the Research Ethics Committee of the Federal University of Juiz de Fora (CEP-UFJF) (Opinion No. 3.294.253). Therefore, all the guidelines involving the National Health Council Resolutions nº 466/2012 and 510/2016 were followed.

Face-to-face interviews were conducted from September 26, 2019, to February 3, 2020, in the consultation rooms of the prison unit, at the Health Care Center (NAS), and on the premises of a factory to collect data. Participants were identified by numerical code, preserving and protecting the confidentiality of information. The initial sample started from a list containing 134 women. Sixteen more women became eligible after completing 30 days of imprisonment during the research, totaling 150 women. We recorded 51 losses related to transfers (4), permits (21), and interruption of data collection due to the COVID-19 pandemic (26), arriving at a final sample of 99 participants.

The data collection tool used in the research consisted of semi-structured questions, elaborated from the tool used by Minayo and Constantino[2] in the research "Study of the health conditions and quality of life of inmates and the environmental conditions of prisons in the State of Rio de Janeiro" and by standardized scales.

Outcomes were assessed using the Patient Health Questionnaire-4 (PHQ-4), a tool with discriminative potential, short and easy to apply, validated for detecting anxiety and depressive symptoms, and widely used in scientific research[25-28]. The application and interpretation of the findings followed the literature recommendations[25,26].

The PHQ-4 scale consists of four items referring to the last two weeks: i) Feeling nervous, anxious or on edge; ii) Not being able to stop or control worrying; iii) Little interest or pleasure in doing things; iv) Feeling down, depressed, or hopeless. Each item has a Likert scale response, ranging from "not at all" (score 0) to "nearly every day" (score 3). Thus, the scale has a total score ranging from 0 to 12, with a recommendation that a score greater than or equal to 6 confirms psychological distress with risk of illness. Another way of interpreting the results of this scale is by evaluating the scores of the first two items and the last two, ranging from 0 to 6. In this case, a score greater than or equal to 3 should be interpreted as positive for anxiety and for depressive symptoms[25,26].

The independent variables composed a theoretical model of hierarchical blocks[29] for analyzing the investigated outcomes. Block 1, more proximal, was composed of sociodemographic variables: age; self-declared skin color; gender; marital status; children; level of education; monthly income before imprisonment; and subjective social status. Subjective social status was measured using the Mac Arthur Subjective Social Status Scale (SSS), which assesses the individual's self-perceived social position[30].

Block 2 consisted of variables referring to the health of women deprived of liberty, subdivided into i) referred: self-perceived health; morbidity; treated health conditions; anxiety symptoms; depressive symptoms; active smoker; alcohol use; tobacco use; marijuana use; use of medication to lose weight or stay awake (on) without a prescription; use of sedatives, anxiolytics, tranquilizers, or antidystonics without a prescription; and ii) health care: receiving health care; visit report with: doctor; psychologist; and social worker; visit frequency and satisfaction with the care provided by these professionals.

Block 3, more distal, consisted of incarceration variables, divided into four subgroups. The first subgroup contained variables on sociability and leisure: family ties; receiving a social visit; receiving a scheduled and intimate visit; study and work activity; participation in religious celebration; level of satisfaction with the relationship with other inmates and the agents; habit/custom of reading; watching TV; engaging in sports; talking; staying alone; sleeping; writing. The second contained variables related to criminal characteristics: type of crime committed for the current sentence; time of incarceration; sentence received; time of sentence received; penal regime;

level of satisfaction with the cell's size and conditions; the activities performed in prison; the food offered by the unit; transport (escort).

The third subgroup contained variables related to prejudice and violence: discriminatory treatment by other inmates or staff; reporting risk of exposure to abuse; report of having suffered abuse/injury; suicide attempt. Furthermore, the fourth subgroup contained variables about post-incarceration expectations regarding personal, family, professional life, the standard of living, and working and health conditions.

The participants were identified by numerical code for building the database, preserving secrecy, and offering protection to information confidentiality. Data were organized and statistically processed using the IBM Statistical Package for the Social Sciences (SPSS) software, version 15.0 for Windows.

The descriptive analysis estimated the absolute and relative frequencies and the prevalence of outcomes with respective 95% confidence intervals (95%CI). We calculated the measures of central tendency and dispersion for the continuous variables. We evaluated the association between the dependent and independent variables using chi-square (χ^2) analysis in the bivariate analysis.

In multivariate analysis, we performed Poisson regression with robust variance to verify the independent variables associated with the outcome, controlling for possible confounding factors (adjusted prevalence ratio and 95% CI), adopting the theoretical determination model with three hierarchical blocks as reference. The variables were first adjusted to each other within each block. Variables with a p-value≤0.20 entered the regression and were then adjusted to a level higher than theirs at the 5% significance level.

Results

The prevalence of anxiety and depressive symptoms was 75.8% (95%CI 66.1%-83.8%) and 65.7% (95%CI 55.4%-74.9%), respectively. The sample consisted of 99 women with a mean age of 33.21 years (SD±9.26), where 74.7% self-declared black (black and brown), 61.6% were in the stratum of no schooling until incomplete elementary school, most (85.9%) reported having children, had low monthly income before incarceration and worse self-perceived subjective social status (81.8%). The health conditions treated in the last year were dengue (8.1%), syphilis (6.1%), and HIV/AIDS (2.0%). Approximately 70.7% reported tobacco use in the last 30 days while serving the sentence, 4.0% marijuana, 3.0% alcohol, and 9.1% used some medication without a prescription. Table 1 presents the sociodemographic, health, and health care characteristics.

Approximately 19.2% of the participants denied having family ties, 60.6% reported receiving some visit (social or scheduled), and none received an intimate visit. Around 59.6% said they did not work, 87.9% studied while serving their sentence, 75.8% reported participating in religious celebrations in the prison unit, 20.2% reported having a regular or bad relationship with other inmates, and 26.3% with criminal police officers. The highest level of dissatisfaction regarding the characteristics of incarceration was with the prison unit's food (88.9%). Approximately 52.5% of the sample committed a drug trafficking-related crime, 70.7% had already been sentenced, and 46.5% served time in the closed regime (Table 2).

All reported suffering prejudice from other inmates or employees, besides running some risks in the prison unit. Information regarding discriminatory treatment, exposure to risks, and reports of violence are shown in Table 3.

Among those with anxiety symptoms, 52.0%, 42.7%, and 41.3% rated their post-incarceration expectation negatively regarding their standard of living, working conditions, and professional life, respectively. Also, 30.7%, 28.0%, and 18.7% negatively evaluated the post-incarceration expectation regarding their personal life, working conditions, and professional life, respectively. Among those with depressive symptoms, 52.3% negatively evaluated the post-incarceration expectation regarding the standard of living, 40.0% vis-à-vis working conditions, 35.4% concerning professional life, 30.8% regarding personal life, 27.7% vis-à-vis health conditions and 18.5% concerning family life.

In the bivariate analysis, anxiety symptoms were associated with poor self-perceived health, less than two doctor's visits in the last year, depressive symptoms, non-performance of work activities, dissatisfaction with the escort/transport, being a victim of verbal abuse in the last year, and with reported discriminatory treatment by employees due to their status as detainees and other inmates due to their social status (Table 4).

Also, in the bivariate analysis, depressive symptoms were associated with the 20-29 years age group, poor self-perceived health, anxiety symptoms, the habit of being alone, and dissat-

Table 1. Sociodemographic, health, and health care characteristics of the 99 women deprived of their liberty by investigated outcomes. Juiz de Fora-MG, 2021.

Variable	Anxiety symptoms				Depressive symptoms			
	Identified		Not identified		Identified		Not identified	
	n	%	n	%	n	%	n	%
Block 1 - Sociodemographic variables								
Age group								
20-29 years	29	38.7	7	29.2	30	46.2	6	17.6
30-59 years	46	61.3	17	66.7	35	53.8	28	82.4
Self-declared skin color								
Black	58	77.3	16	33.3	50	23.1	24	70.6
Non-black	17	22.7	8	66.7	15	76.9	10	29.4
Gender								
Cisgender	70	93.3	21	87.5	62	95.4	29	85.3
Transgender	1	1.3	2	8.3	1	1.5	2	5.9
Non-binary	4	5.3	1	4.2	2	3.1	3	8.8
Marital status								
Companion/married	40	53.3	11	45.8	35	53.8	16	47.1
Single/separated/widow/other	35	46.7	13	54.4	30	46.2	18	52.9
Children								
Yes	66	88.0	19	79.2	55	84.6	30	88.2
No	9	12.0	5	20.8	10	15.4	4	11.8
Level of education								
Up to incomplete elementary school	47	62.7	14	58.3	43	66.2	18	52.9
Elementary school to incomplete High School	18	24.0	3	12.5	13	20.0	8	23.5
High School and over	10	13.3	7	29.2	9	13.8	8	23.5
Monthly income before incarceration								
0-1 minimum wage	50	66.7	16	66.7	43	66.2	23	67.6
>1 to ≤2 minimum wages	22	29.3	4	16.7	17	26.2	9	26.5
>2 minimum wages	3	4.0	4	16.7	5	7.7	2	5.9
Subjective Social Status								
Best SSS	12	16.0	6	25.0	14	21.5	4	11.8
Worse SSS	63	84.0	18	75.0	51	78.5	30	88.2
Block 2.1 - Variables related to the health of women deprived of liberty: referred								
Self-perceived health								
Good	45	40.0	23	95.8	38	58.5	30	11.8
Poor	30	60.0	1	4.1	27	41.5	4	88.2
Referred morbidity								
Yes	39	52.0	13	54.0	34	52.3	18	52.9
No	36	48.0	11	45.8	31	47.7	16	47.1
Active smoker								
Yes	57	76.0	15	62.5	51	78.5	21	61.8
No	18	24.0	9	37.5	14	21.5	13	38.2
Anxiety symptoms								
Yes	75	75.8	24	24.2	59	90.8	16	47.1
No	-	-	-	-	6	9.2	18	52.9
Depressive symptoms								
Yes	59	78.7	6	25.0	65	65.7	34	34.3
No	16	21.3	18	75.0	-	-	-	-
Hansen's Disease								
Yes	0	0.0	0	0.0	0	0.0	0	0.0
No	75	100.0	24	100.0	65	100.0	34	100.0

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Table 1. Sociodemographic, health, and health care characteristics of the 99 women deprived of their liberty by investigated outcomes. Juiz de Fora-MG, 2021.

Variable	Anxiety symptoms				Depressive symptoms			
	Identified		Not identified		Identified		Not identified	
	n	%	n	%	n	%	n	%
Leishmaniasis								
Yes	0	0.0	0	0.0	0	0.0	0	0.0
No	75	100.0	24	100.0	65	100.0	34	100.0
Dengue								
Yes	8	10.7	0	0.0	6	9.2	2	5.9
No	67	89.3	24	100.0	59	90.8	32	94.1
Tuberculosis								
Yes	0	0.0	0	0.0	0	0.0	0	0.0
No	75	100.0	24	100.0	65	100.0	34	100.0
Syphilis								
Yes	5	6.7	1	4.2	5	7.7	1	2.9
No	70	93.3	23	95.8	60	92.3	33	97.1
Gonorrhea								
Yes	0	0.0	0	0.0	0	0.0	0	0.0
No	75	100.0	24	100.0	65	100.0	34	100.0
HIV/AIDS								
Yes	1	1.3	1	4.2	1	1.5	1	2.9
No	74	98.7	23	95.8	64	98.5	33	97.1
Alcohol use in the last 30 days of deprivation of liberty								
Yes	3	4.0	0	0.0	2	3.1	1	2.9
No	72	96.0	24	100.0	63	96.9	33	97.1
Tobacco use in the last 30 days of deprivation of liberty								
Yes	54	72.0	16	66.7	50	76.9	20	58.8
No	21	28.0	8	33.3	15	23.1	14	41.2
Marijuana use in the last 30 days of deprivation of liberty								
Yes	4	5.3	0	0.0	3	4.6	1	2.9
No	71	94.7	24	100.0	62	95.4	33	97.1
Use of weight loss medication or medication for staying awake (on) without a prescription in the last 30 days of deprivation of liberty								
Yes	1	1.3	0	0.0	1	1.5	0	0.0
No	74	98.7	24	100.0	64	98.5	34	100.0
Use of tranquilizer, anxiolytic, tranquilizer, or anti-dystonic without a prescription in the last 30 days of deprivation of liberty								
Yes	8	10.7	1	4.2	6	9.2	3	8.8
No	67	89.3	23	95.8	59	90.8	31	91.2
Block 2.2 - Variables related to the health of women deprived of liberty: health care								
Health care report								
Yes	67	89.3	23	95.8	59	90.8	31	91.2
No	8	10.7	1	4.2	6	9.2	3	8.8
Doctor visit in the last year								
Yes	70	93.3	23	95.8	60	92.3	33	87.1
No	5	6.7	1	4.2	5	7.7	1	2.9

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Table 1. Sociodemographic, health, and health care characteristics of the 99 women deprived of their liberty by investigated outcomes. Juiz de Fora-MG, 2021.

Variable	Anxiety symptoms				Depressive symptoms			
	Identified		Not identified		Identified		Not identified	
	n	%	n	%	n	%	n	%
Psychologist visit in the last year								
Yes	59	78.7	16	66.7	48	73.8	27	79.4
No	16	21.3	8	33.3	17	26.2	7	20.6
Social worker visit in the last year								
Yes	72	91.7	22	91.7	61	93.8	33	97.1
No	3	8.3	2	8.3	4	6.2	1	2.9
Number of doctor visits in the last year								
None to two	42	56.9	7	29.1	34	52.3	15	44.1
More than two	33	44.0	17	70.8	31	47.7	19	55.9
Number of psychologist visits in the last year								
None to two	54	72.0	20	83.3	48	73.8	26	76.5
More than two	21	28.0	4	16.7	17	26.2	8	23.5
Number of social worker visits in the last year								
None to two	29	38.7	9	37.5	27	41.5	11	32.4
More than two	46	61.3	15	62.5	38	58.5	23	67.6
Level of satisfaction with doctor visits								
Good	35	48.6	15	34.8	30	48.3	20	60.6
Fair/Poor	37	51.4	8	65.2	32	51.6	13	39.4
Level of satisfaction with psychologist visits								
Good	43	72.9	17	89.5	36	73.5	24	82.8
Fair/Poor	16	27.1	2	10.5	13	26.5	5	17.2
Level of satisfaction with social worker visits								
Good	57	78.1	20	87.0	50	79.4	27	81.8
Fair/Poor	16	21.9	3	13.0	13	20.6	6	18.2

Source: Authors.

isfaction with activities in prison, reported discriminatory treatment by employees due to their status as detainees and other inmates due to their condition of inmates, social status, and the crime committed and having been a victim of verbal abuse in the last year (Table 4).

In the final model of the multivariate analysis regarding anxiety symptoms, only depressive symptoms were associated (6.42; 95%CI 1.96-21.06). In the final model, depressive symptoms were associated with the 20-29 years age group (4.85; 95%CI 1.48-15.87) and anxiety symptoms (12.67; 95%CI 3.92-40.98) (Table 5).

Discussion

We identified a high prevalence of anxiety and depressive symptoms in the studied population. Concerning the female population, previous research found a prevalence of anxiety from 19.1% to 59.4%[13,15,18] and depression from 21.0% to 41.3%[13-16]. The prevalence of anxiety and depressive symptoms indicates a risk of developing a mental disorder, an expression of psychological distress experienced by the participants, which may be associated with conjugality (separation, abuse, betrayal, and discomfort in sexual intercourse), motherhood (weakened bond with children and abortion), and family conflicts (abandonment by partner and loss of family ties)[31].

The high prevalence of anxiety and depressive symptoms in this study can be attributed to a screening and non-diagnostic tool. The discrepancies between the studies may derive from adopting different tools to approach anxiety and depression, besides characteristics related to the facilities in which data was collected, since the

infrastructure and the sociocultural context are related to the mental health conditions based on social and economic determinants[32,33].

Anxiety symptoms and depressive symptoms were bidirectionally associated in the final model. Although previous studies have focused

Table 2. Characteristics related to sociability, leisure and incarceration of the 99 women deprived of their liberty by investigated outcomes. Juiz de Fora-MG, 2021.

Variable	Anxiety symptoms				Depressive symptoms			
	Identified		Not identified		Identified		Not identified	
	n	%	n	%	n	%	n	%
Block 3.1 - Variables related to incarceration: sociability and leisure								
Family ties								
With family ties	59	78.7	21	87.5	52	80.0	28	82.4
No family ties	16	21.3	3	12.5	13	20.0	6	17.6
Receives social visit								
Yes	44	58.7	16	66.7	42	64.6	18	52.9
No	31	41.3	8	33.3	23	35.4	16	47.1
Receives scheduled visit								
Yes	18	24.0	7	29.2	18	27.7	7	20.6
No	57	76.0	17	70.8	47	72.3	27	79.4
Level of satisfaction with the relationship with other inmates								
Good	57	76.0	22	91.7	49	75.4	30	88.2
Fair/poor	18	24.0	2	8.3	16	24.6	4	11.8
Level of satisfaction with the relationship with criminal police officers								
Good	55	73.3	6	25.0	48	73.8	25	73.5
Fair/poor	20	26.7	18	75.0	17	26.2	9	26.5
Studying								
Yes	9	12.0	3	12.5	8	12.3	4	11.8
No	66	88.0	21	87.5	57	87.7	30	88.2
Working								
Yes	26	34.7	14	58.3	22	66.2	18	52.9
No	49	65.3	10	41.7	43	33.8	16	47.1
Attending religious celebrations								
Yes	60	80.0	9	37.5	50	76.9	25	73.5
No	15	20.0	15	62.5	15	23.1	9	26.5
Reading								
Yes	53	70.7	19	79.2	49	75.4	27	79.4
No	22	29.3	5	20.8	16	24.6	7	20.6
Watching TV								
Yes	66	88.0	21	87.5	59	90.8	28	82.4
No	9	12.0	3	12.5	6	9.2	6	17.6
Engaging in sports								
Yes	12	16.0	6	25.0	10	15.4	8	23.5
No	63	84.0	18	75.0	55	84.6	26	76.5
Having a conversation								
Yes	65	86.7	23	95.8	57	87.7	31	91.2
No	10	13.3	1	4.2	8	12.3	3	8.8
Staying alone								
Yes	56	74.7	14	58.3	50	76.9	20	58.8
No	19	25.3	10	41.7	15	23.1	14	41.2

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Table 2. Characteristics related to sociability, leisure and incarceration of the 99 women deprived of their liberty by investigated outcomes. Juiz de Fora-MG, 2021.

Variable	Anxiety symptoms				Depressive symptoms			
	Identified		Not identified		Identified		Not identified	
	n	%	n	%	n	%	n	%
Sleeping								
Yes	71	94.7	22	91.7	62	95.4	31	91.2
No	4	5.3	2	8.3	3	4.6	3	8.8
Writing								
Yes	53	70.7	19	79.2	45	69.2	27	79.4
No	22	29.3	5	20.8	20	30.8	7	20.6
Block 3.2 - Variables related to incarceration: penal characteristics								
Type of crime committed								
Drug trafficking	40	53.3	12	50.0	30	46.2	22	64.7
Other	35	46.7	12	50.0	35	53.8	12	35.3
Incarceration time								
≤15 months	42	56.0	11	45.8	36	55.4	17	50.0
>15 months	33	44.0	13	54.2	29	44.6	17	50.0
Sentence								
Yes	54	72.0	16	66.7	45	69.2	25	73.5
No	21	28.0	8	33.3	20	30.8	9	26.5
Sentence time								
≤7 years	30	60.0	6	37.5	24	57.1	12	50.0
>7 years	20	40.0	10	62.5	18	42.9	12	50.0
Penal regime								
Provisional	21	28.0	8	33.3	20	30.8	9	26.5
Closed	35	46.7	11	45.8	31	47.7	15	44.1
Semi-open	19	25.3	5	20.8	14	21.5	10	29.4
Level of satisfaction with the cell conditions and size								
Good	39	52.0	17	70.8	33	50.8	23	32.4
Fair/Poor	36	48.0	7	29.2	32	49.2	11	67.6
Level of satisfaction with prison activities								
Good	43	37.7	18	78.3	36	59.0	25	80.6
Fair/Poor	26	62.3	5	21.7	25	41.0	6	19.4
Level of satisfaction with prison food								
Good	7	9.3	4	16.7	8	12.3	3	8.8
Fair/Poor	68	90.7	20	83.3	57	87.7	31	91.2
Level of satisfaction with escort/transport								
Good	36	56.3	17	81.0	33	58.9	20	69.0
Fair/Poor	28	43.8	4	19.0	23	41.1	9	31.0

Source: Authors.

on anxiety and depressive disorders, the association between these symptoms has not been verified[13-18]. The inter-association found is an essential indicator of these disorders' multicausality and the need for interventions that minimize the complex conditions from the onset of any of these symptoms. Studying 174 women deprived of their liberty from two prisons in Spain, Caravaca-Sánchez *et al.*[34] bring elements that explain the association between the disorders, relating negative emotional states to anxiety and depression. Thus, negative affections on the emotional state, the capacity for positive interaction, and affect – possible consequences of both mental disorders – can lead to the development of both.

Depressive symptoms were associated with the youngest age group (20-29 years) in the final model. The literature reports divergent findings

Table 3. Characteristics referring to prejudiced treatment, exposure to risks and reports of violence by 99 women deprived of their liberty by the investigated outcomes. Juiz de Fora-MG, 2021.

Variable	Anxiety symptoms				Depressive symptoms			
	Identified		Not identified		Identified		Not identified	
	n	%	n	%	n	%	n	%
Block 3.3 - Variables related to incarceration: prejudice and violence								
Prejudiced treatment by employees due to detainee status								
Yes	35	46.7	5	20.8	32	49.2	8	23.5
No	40	53.3	19	79.2	33	50.8	26	76.5
Prejudiced treatment by employees due to ethnicity/skin color								
Yes	2	2.7	1	4.2	3	4.6	0	0.0
No	73	97.3	23	95.8	62	95.4	34	100.0
Prejudiced treatment by employees due to social condition								
Yes	13	17.3	1	4.2	9	13.8	5	14.7
No	62	82.7	23	95.8	56	86.2	29	85.3
Prejudiced treatment by employees due to sexual orientation								
Yes	7	9.3	1	4.2	6	9.2	2	5.9
No	68	90.7	23	95.8	59	90.8	32	94.1
Prejudiced treatment by employees due to crime committed								
Yes	16	21.3	3	12.5	16	24.6	3	8.8
No	59	78.7	21	87.5	49	75.4	31	91.2
Prejudiced treatment by employees due to looks								
Yes	9	12.0	5	20.8	9	13.8	5	14.7
No	66	88.0	19	79.2	56	86.2	29	85.3
Prejudiced treatment by other detainees due to detainee status								
Yes	27	36.0	4	16.7	25	38.5	6	17.6
No	48	64.0	20	83.3	40	61.5	28	82.4
Prejudiced treatment by other detainees due to ethnicity/skin color								
Yes	5	6.7	0	0.0	5	7.7	0	0.0
No	70	93.3	24	100.0	60	92.3	34	100.0
Prejudiced treatment by other detainees due to social condition								
Yes	24	32.0	2	8.3	22	33.8	4	11.8
No	51	68.0	22	91.7	43	66.2	30	88.2
Prejudiced treatment by other detainees due to sexual orientation								
Yes	13	17.3	3	12.5	14	21.5	2	5.9
No	62	82.7	21	87.5	51	78.5	32	94.1
Prejudiced treatment by other detainees due to crime committed								
Yes	14	18.7	4	16.7	16	24.6	2	5.9
No	61	81.3	20	83.3	49	75.4	32	94.1
Prejudiced treatment by other detainees due to looks								
Yes	21	28.0	3	12.5	19	29.2	5	14.7
No	54	72.0	21	87.5	46	70.8	29	85.3

it continues

Table 3. Characteristics referring to prejudiced treatment, exposure to risks and reports of violence by 99 women deprived of their liberty by the investigated outcomes. Juiz de Fora-MG, 2021.

Variable	Anxiety symptoms				Depressive symptoms			
	Identified		Not identified		Identified		Not identified	
	n	%	n	%	n	%	n	%
Physical abuse risk								
Yes	38	50.7	11	45.8	36	55.4	13	38.2
No	37	49.3	13	54.2	29	44.6	21	61.8
Sexual violence risk								
Yes	0	0.0	1	4.2	1	1.5	0	0.0
No	75	100.0	23	95.8	64	98.5	34	100.0
Psychological violence risk								
Yes	50	66.7	13	54.2	44	67.7	19	55.9
No	25	33.3	11	45.8	21	32.3	15	44.1
Stab wound risk								
Yes	18	24.0	7	29.2	17	26.2	8	23.5
No	57	76.0	17	70.8	48	73.8	26	76.5
Risk of firearm injury								
Yes	14	18.7	6	25.0	13	20.0	7	20.6
No	61	81.3	18	75.0	52	80.0	27	79.4
Burning risk								
Yes	16	21.3	6	25.0	16	24.6	6	17.6
No	59	78.7	18	75.0	49	75.4	28	82.4
Explosion risk								
Yes	24	32.0	9	37.5	22	33.8	11	32.4
No	51	68.0	15	62.5	43	66.2	23	67.6
Victim of physical abuse in the last year								
Yes	14	18.7	2	8.3	12	18.5	4	11.8
No	61	81.3	22	91.7	53	81.5	30	88.2
Victim of verbal abuse in the last year								
Yes	41	54.7	5	20.8	37	56.9	9	26.5
No	34	45.3	19	79.2	28	43.1	25	73.5
Victim of sexual harassment or abuse in the last year								
Yes	0	0.0	1	4.2	1	1.5	0	0.0
No	75	100.0	23	95.8	64	98.5	34	100.0
Victim of fall in the last year								
Yes	13	17.3	2	8.3	12	18.5	3	8.8
No	62	82.7	22	91.7	53	81.5	31	91.2
Victim of attempted murder in the last year								
Yes	1	1.3	0	0.0	1	1.5	0	0.0
No	74	98.7	24	100.0	64	98.5	34	100.0
Attempted suicide in the last year								
Yes	7	9.3	0	0.0	7	10.8	0	0.0
No	68	90.7	24	100.0	58	89.2	34	100.0

Source: Authors.

regarding the relationship between age and depression[14,33]. Green *et al.*[14] found a weak positive correlation. However, it should be noted that most participants reported one or more mental disorders (67%) and alcohol (65%) or other drugs (69%) abuse/dependence. Esteban-Febres *et al.*[33] identified a weak negative correlation between depressive symptoms and age group. The differences between the studies may result from other age-related variables not observed, such as

Table 4. Crude prevalence ratios, adjusted within the hierarchical blocks and adjusted in the final model, for the presence of anxiety symptoms in incarcerated women. Juiz de Fora-MG, 2021.

Variable	%	Crude PR (95%CI)	p*	Adjusted PR in the block (95%CI)	p**	Adjusted PR - final model (95%CI)	p**
Block 2 - Variables related to the health of women deprived of liberty							
Self-perceived health			0.002		0.048		0.071
Good	66.2	1		1		1	
Poor	96.8	15.33 (1.97-119.67)		8.47 (1.02-70.64)		7.16 (0.84-60.86)	
Number of visits with the doctor in the last year			0.046		0.046		0.077
>2	66.0	1		1		1	
≤2	86.0	3.18 (1.12-9.01)		3.22 (1.02-10.17)		2.88 (0.89-9.34)	
Depressive symptoms			<0.001		<0.001		0.002
No	47.1	1		1		1	
Yes	90.8	11.06 (3.77-32.46)		7.47 (2.34-23.87)		6.42 (1.96-21.06)	
Block 3 - Variables related to incarceration							
Working			0.069		0.019		0.257
Yes	65.0	1		1		1	
No	83.1	2.64 (1.03-6.76)		4.28 (1.27-14.43)		1.95 (0.62-6.16)	
Satisfaction with escort-transportation			0.077		0.140		-
Yes	67.9	1		1		-	
No	87.5	3.31 (1.00-10.93)		2.72 (0.72-10.30)		-	
Prejudiced treatment by employees due to detainee status			0.045		0.658		-
No	67.8	1		1		-	
Yes	87.5	3.33 (1.12-9.84)		1.43 (0.30-6.88)		-	
Prejudiced treatment by other detainees due to social condition			0.043		0.044		0.288
No	69.9	1		1		1	
Yes	92.3	5.18 (1.12-23.83)		9.58 (1.06-86.40)		2.51 (0.46-13.71)	
Victim of verbal abuse in the last year			0.008		0.177		-
No	64.2	1		1		-	
Yes	89.1	4.58 (1.55-13.56)		2.91 (0.62-13.76)		-	

PR: Prevalence Ratio; 95%CI: Confidence Interval. *Pearson's chi-square test; **Poisson regression with robust variance.

Source: Authors.-

Table 5. Crude prevalence ratios. adjusted within the hierarchical blocks and adjusted in the final model for the presence of depressive symptoms in incarcerated women. Juiz de Fora-MG. 2021.

Variables	%	Crude PR (95%CI	p*	Adjusted PR in the block (95%CI)	p**	Adjusted PR - final model (95%CI)	p**
Block 1 - Sociodemographic variables and Subjective Social Status							
Age group			0.010		-		0.009
30-59 years	55.6	1		-		1	
20-29 years	83.3	4.00 (1.46-10.96)		-		4.85 (1.48-15.87)	
Block 2 - Variables related to the health of women deprived of liberty							
Self-perceived health			0.005		0.087		-
Good	55.9	1		1		-	
Poor	87.1	5.33 (1.68 – 16.90)		2.94 (0.86 - 10.06)		-	
Depressive symptoms			< 0.001		<0.001		< 0.001
No	25.0	1		1		1	
Yes	78.7	11.06 (3.78 – 32.46)		8.22 (2.70 - 25.04)		12.67 (3.92 - 40.98)	
Block 3 - Variables related to incarceration							
Staying alone			0.100		0.138		-
Yes	51.7	1		1		-	
No	71.4	2.33 (0.95-5.70)		2.15 (0.78-5.91)		-	
Satisfaction with prison activities			0.066		0.104		-
Yes	59.0	1		1		-	
No	80.6	2.89 (1.04-8.08)		2.58 (0.82-8.07)		-	
Prejudiced treatment by employees due to detainee status			0.024		0.393		-
No	55.9	1		1		-	
Yes	80.0	3.15 (1.24-7.99)		1.68 (0.51-5.53)		-	
Prejudiced treatment by other detainees due to detainee status			0.058		0.997		-
No	58.8	1		1		-	
Yes	80.6	2.92 (1.06-8.04)		1.00 (0.24-4.15)		-	
Prejudiced treatment by other detainees due to social condition			0.033		0.219		-
No	58.9	1		1		-	
Yes	84.6	3.84 (1.20-12.28)		2.58 (0.57-11.72)		-	
Prejudiced treatment by other detainees due to crime committed			0.043		0.405		-
No	60.5	1		1		-	
Yes	88.9	5.22 (1.13-24.27)		2.15 (0.35-13.07)		-	
Victim of verbal abuse in the last year			0.008		0.176		-
No	52.8	1		1		-	
Yes	80.4	3.67 (1.48-9.09)		2.23 (0.70-7.10)		-	

PR: Prevalence Ratio; 95%CI: Confidence Interval. *Pearson's chi-square test; **Poisson regression with robust variance.

Source: Authors.

the level of coping mechanisms, which tends to be developed with advancing age[33].

A survey carried out by IBOPE Conecta in the second half of 2019 with 2,000 Brazilians in different metropolitan regions of the country (Rio de Janeiro, Minas Gerais, Rio Grande do Sul, Distrito Federal, and Fortaleza) highlights the ignorance and shame that young people, primarily aged 18-24 years, feel vis-à-vis depression, which corroborates the setting of not seeking treatment in a timely manner[35]. Thus, we could think that this study's association between depressive symptoms and the younger age group derives from ignorance and shame combined with a previous condition not adequately treated. Mrejen and Rocha[36] identified that seven of every ten adult Brazilian individuals diagnosed with depression did not receive any treatment.

A higher occurrence of anxiety symptoms was observed among participants who received two or fewer visits in the last year. Literature reveals that females[15,36], blacks, and low income are associated with unequal access to treatment for mental disorders[36], which are the main characteristics of the population studied, with the aggravation of existing inequalities within the prison system[3]. Thus, the setting may reflect inequalities in access and factors related to the organization of health care within the prison environment[8,21].

A higher frequency of anxiety and depressive symptoms were observed among those who reported poor self-perceived health. Self-perception of health is an individual assessment resulting from one's experiences and interpretations. It is a powerful indicator of an individual's objective state of health[37]. Ross *et al.*[38] found a relationship between worse mental health status and poor self-perceived health in a mixed population deprived of liberty. A similar relationship was observed in the study by Leite *et al.*[37] for the general population when analyzing the dimensions underlying psychological well-being and finding a positive two-dimensional association with a good self-assessment of one's health. Thus, it is plausible to consider an inseparability between mental health and other dimensions that make up the health construct, and besides the subjective character, this indicator also derives from objective aspects, influenced by biological, socioeconomic, and service bonding factors[37].

We should highlight that, until 2020, the studied municipality had not adhered to the PNAISP, established by the Interministerial Ordinance of the Ministry of Health and the Ministry of Justice (MS/MJ) No. 1/2014, nor had teams trained and qualified for it. This policy's landmark vis-à-vis then-current PNSSP, established by the Interministerial Ordinance of the MS/MJ No. 1,777/2003, provided that the Prison PHC teams are inserted and integrated into the RAS of the municipality, qualifying the care offered, and start serving the entire population deprived of liberty, no longer limited to people in penitentiaries, prisons, and custody and treatment hospitals who have already been sentenced[23,24]. Signing this policy could favor access to visits not only medical but also with other health professionals through better conditions of human and financial resources and greater intersectoral articulation[39].

As previously identified by Araújo *et al.*[8] and Ruiz and Abrantes[21], access inequalities in the prison system persist, adversely affecting the quality of care received by the inmates, which is an access barrier. Moreover, unsatisfactory integration with the RAS has already been identified in other studies as a factor that negatively impacts the health of the population deprived of liberty[3,10], also affecting mental health. The COVID-19[9] pandemic deteriorates this setting, and it is essential to know the factors associated with anxiety and depressive symptoms to build preventive and health promotion strategies.

As for physical, sexual, or psychological violence, previous studies have already shown the association with anxiety[34] and depressive disorders[14-34]. Such findings support the understanding that mental health has social determinants, which can negatively affect health indicators and contribute to psychological distress and possible development of mental disorders[32], with specificities for the prison system environment[4]. Thus, the results found in the bivariate analysis regarding discriminatory treatment and the report of having been a victim of verbal abuse are understandable.

Anxiety symptoms were higher among those who did not work, as found in a previous study[33], and those who reported dissatisfaction with escort/transport. Depressive symptoms were more present among women who reported the habit of being alone and dissatisfaction with prison activities. Understanding these findings is vital for recognizing the need for captivating and integrative activities and developing strategies that fill time in a qualified way and offer dignified and satisfactory conditions while moving around inmates. Such elements contribute to attenuating negative feelings experienced by these women, such as loneliness, anguish, longing, concern, irritation, fear, and isolation[40], which adversely

impact mental health while leading us to understand health in its enlarged meaning.

The results presented here must be interpreted within their limitations. As this is a cross-sectional study, it is impossible to establish cause and effect between the identified associations. We also wish to add that despite the methodological rigor adopted to reduce bias and increase the reliability of the findings, the sample size may have impacted the precision of the results, increasing the probability of false negatives. However, we should underscore some elements: the study offers valuable input by revealing the high prevalence of anxiety and depressive symptoms, and it is unprecedented research for the municipality and region. Furthermore, we should mention the difficulties in accessing this population, especially during the COVID-19 pandemic. Adopting different tools and criteria for screening and diagnosing anxiety and depression hinders the comparison of the results[41]. Moreover, some women did not make up the final sample due to interrupted data collection in the COVID-19 pandemic.

Although the elements presented focus on generalizing and comparing data with the literature, this does not reduce the relevance of the findings. The results presented may have a social impact due to the scarcity of recent studies published in the last five years exclusively addressing the female population deprived of liberty, exploring as many variables as those presented here. Therefore, these results bring visibility to the needs of the population in question, breaking with the silencing that touches them, subsidizing the elaboration of actions, strategies, and public policies.

We conclude that the study population has high anxiety and depressive symptoms prevalence. Despite the lower number of factors associated with outcomes in the final model, emphasizing the inter-association between them, we can verify that such disorders dialogue with sociodemographic, health, and incarceration conditions.

Given our discussion, we can reflect on the importance of reformulating, expanding, and qualifying the health care provided and guaranteeing actions directly related to the social and economic determinants of the mental health of the population in question. Thus, it is necessary to invest in strategies for qualifying idle time, interventions to prevent situations of violence, and greater inter- and intra-sectoral articulation to ensure the effectiveness and continuity of actions initiated in the penal establishment that should not be lost after serving a sentence, emphasizing health promotion.

Collaborations

CR Laurindo worked on the design, data tabulation, statistical analysis, methodology, data interpretation and discussion, final considerations, draft writing, and review of the preliminary draft, its edits, and final version. ICG Leite worked on supervising, guiding the research, and reviewing the draft writing, its edits, and the final version. DT Cruz worked on the research's design, methodology, supervision, and guidance and the review of the draft writing, its edits, and the final version.

References

1. Santos ATN. A crise no sistema prisional brasileiro: a ineficiência da ressocialização em decorrência da superlotação. *CGCHS* 2020; 6(1):11-20.
2. Minayo MCS, Constantino P. *Deserdados sociais*: *condições de vida e saúde dos presos do estado do Rio de Janeiro*. Rio de Janeiro: Editora Fiocruz; 2015.
3. Ribeiro MAT, Deus NMSF. Mulheres encarceradas: a saúde atrás das grades. *Rev Psi Divers Saude* 2017; 6(4):324-339.
4. Santos MV, Alves VH, Pereira AV, Rodrigues DP, Marchiori GRS, Guerra JVV. Saúde mental de mulheres encarceradas em um presídio do estado do Rio de Janeiro. *Texto Contexto Enferm* 2017; 26(2):e5980015.
5. World Prison Brief (WPF). *The World Prison Brief Data*: *occupancy level (based on official capacity)* [Internet]. 2021 [cited 2021 nov 26]. Available from: https://www.prisonstudies.org/highest-to-lowest/occupancy-level?field_region_taxonomy_tid=All.
6. Brasil. Ministério da Justiça e Segurança Pública (MJSP). *Levantamento Nacional de Informações Penitenciárias*: *julho - dezembro 2020* [Internet]. 2021 [cited 2021 nov 26]. Available from: https://app.powerbi.com/view?r=eyJrIjoiZTU2MzVhNWYtMzBkNi00NzJlLTllOWItZjYwY2ExZjBiMWNmIiwidCI6ImViMDkwNDIwLTQ0NGMtNDNmNy05MWYyLTRiOGRhNmJmZThlMSJ9.
7. Brasil. Departamento Penitenciário Nacional. *Levantamento Nacional de Informações Penitenciárias – INFOPEN Mulheres*. 2ª ed. Brasília: MJSP/DEPEN; 2018.
8. Araújo PF, Ker LRFS, Kendal C, Rutherford GW, Seal DW, Pires Neto RJ, Pinheiro PNC, Galvão MTG, Araújo LF, Pinheiro FML, Silva AZ. Behind bars: the burden of being a woman in Brazilian prisons. *BMC Int Health Hum Rights* 2020; 20:28.
9. Santos GC, Simôa TC, Bispo TCF, Martins RD, Santos DSS, Almeida AOLC. Covid-19 nas prisões: efeitos da pandemia sobre a saúde mental de mulheres privadas de liberdade. *Rev Baiana Enferm* 2020; 34:e38235.
10. Schultz ALV, Dotta RM, Stock BS, Dias MTG. Limites e desafios para o acesso das mulheres privadas de liberdade e egressas do sistema prisional nas Redes de Atenção à Saúde. *Physis* 2020; 30(3):e300325.
11. Fazel S, Hayes AJ, Bartellas K, Clerici M, Trestman R. Mental health of prisoners: prevalence, adverse outcomes, and interventions. *Lancet Psychiatry* 2016; 3(9):871-881.
12. Baranyi G, Scholl C, Fazel S, Patel V, Priebe S, Mundt AP. Severe mental illness and substance use disorders in prisoners in low-income and middle-income countries: a systematic review and meta-analysis of prevalence studies. *Lancet Glob Health* 2019; 7(4):e461-e471.
13. Costa RC, Sassi RAM, Tímbola VS, Lazzari TR, Reis AJ, Gonçalves CT. Prevalence and associated factors with depression and anxiety in prisoners in South of Brazil. *Rev Psiquiatr Clin* 2020; 47(4):89-94.
14. Green BL, Dass-Brailsford P, Mendoza AH, Mete M, Lynch SM, DeHart DD, Belknap J. Trauma Experiences and Mental Health Among Incarcerated Women. *Psychol Trauma* 2016; 8(4):455-463.
15. Hernández-Vásquez A, Rojas-Roque C. Diseases and access to treatment by the Peruvian prison population: an analysis according to gender. *Rev Esp Sanid Penit* 2020; 22(1):9-15.

16. Santos MM, Barros CRS, Andreoli SB. Fatores associados à depressão em homens e mulheres presos. *Rev Bras Epidemiol* 2019; 22:e190051.
17. Bebbington P, Jakobowitz S, McKenzie N, Killaspy H, Iveson R, Duffield G, Kerr M. Assessing needs for psychiatric treatment in prisoners: 1. Prevalence of disorder. *Soc Psychiatry Psychiatr Epidemiol* 2017; 52(2):221-229.
18. Tung T-H, Hsiao Y-Y, Shen S-A, Huang C. The prevalence of mental disorders in Taiwanese prisons: a nationwide population-based study. *Soc Psychiatry Psychiatr Epidemiol* 2019; 54(3):379-386.
19. Lynch S, Heath N. Predictors of incarcerated women's postrelease PTSD, depression, and substance-use problems. *J Offender Rehabil* 2017; 56(3):157-172.
20. Stanton AE, Kako P, Sawin KJ. Mental Health Issues of Women After Release From Jail and Prison: A Systematic Review. *Issues Ment Health Nurs* 2016; 37(5):299-331.
21. Ruiz JLS, Abrantes MM. O sistema prisional brasileiro e a Covid-19: prevenção e desafios. *Libertas* 2020; 20(2):619-642.
22. Instituto Brasileiro de Geografia e Estatística (IBGE). *Cidades e Estados*: *Juiz de Fora* [Internet]. 2020 [acessado 2021 nov 26]. Disponível em: https://www.ibge.gov.br/cidades-e-estados/mg/juiz-de-fora.html.
23. Brasil. Portaria Interministerial nº 1/MS/MJ, de 2 de janeiro de 2014. Institui a Política Nacional de Atenção Integral à Saúde das Pessoas Privadas de Liberdade no Sistema Prisional (PNAISP) no âmbito do Sistema Único de Saúde (SUS). *Diário Oficial da União*; 2014.
24. Brasil. Portaria Interministerial nº 1.777/MS/MJ, de 9 de setembro de 2003. Aprova o Plano Nacional de Saúde no Sistema Penitenciário, constante do Anexo I desta Portaria, destinado a prover a atenção integral à saúde da população prisional confinada em unidades masculinas e femininas, bem como nas psiquiátricas. *Diário Oficial da União*; 2003.
25. Kroenke K, Spitzer RL, Williams JBW, Löwe B. An Ultra-Brief Screening Scale for Anxiety and Depression: The PHQ-4. *Psychosomatics* 2009; 50(6):613-621.
26. Löwe B, Wahl I, Rose M, Spitzer C, Glaesmer H, Wingenfeld K, Schneider A, Brähler E. A 4-item measure of depression and anxiety: validation and standardization of the Patient Health Questionnaire-4 (PHQ-4) in the general population. *J Affect Disord* 2010; 122(2):86-95.
27. Stanhope J. Patient Health Questionnaire-4. *Occup Med* 2016; 66(9):760-761.
28. Silva WLF, Paula GL, Gomes LC, Cruz DT. Prevalência de sofrimento psíquico em pessoas idosas: um estudo de base comunitária. *Rev Bras Geriatr Gerontol* 2020; 23(5):200246.
29. Victora CG, Huttly SR, Fuchs SC, Olinto MT. The role of conceptual frameworks in epidemiological analysis: a hierarchical approach. *Int J Epidemiol* 1997; 26(1):224-227.
30. Zell E, Strickhouser JE, Krizan Z. Subjective social status and health: A meta-analysis of community and society ladders. *Health Psychol* 2018; 37(10):979-987.
31. Campos IO, Zanello V. Saúde mental e gênero: o sofrimento psíquico e a invisibilidade das violências. *Vivencia* 2016; 1(48):105-118.
32. Alves AAM, Rodrigues NFR. Determinantes sociais e económicos da Saúde Mental. *Rev Port Saude Publica* 2010; 28(2):127-131.
33. Esteban-Febres S, Enoki-Miñano K, Escudero-Moreira T, La Cunza-Peña M, Quispe-Gutiérrez Y. Factors related to psychopathological symptoms of female inmates of a prison in Lima. *Rev Esp Sanid Penit*. 2019; 21:11-17.
34. Caravaca-Sánchez F, Fearn NE, Vidovic KR, Vaughn MG. Female Prisoners in Spain: Adverse Childhood Experiences, Negative Emotional States, and Social Support. *Health Soc Work* 2019; 44(3):157-166.
35. IBOPE Conecta. *Pesquisa Depressão, suicídio e tabu no Brasil: um novo olhar sobre a Saúde Mental*. *Pesquisa realizada com a população de internautas da classe ABC e residentes da capital paulista e de diferentes regiões metropolitanas do País (Rio de Janeiro, Belo Horizonte, Fortaleza, Porto Alegre e Brasília)*. São Paulo: Pfizer; 2019.
36. Mrejen M, Rocha R. Como anda a saúde mental no Brasil? Evolução, desigualdades e acesso a tratamentos. *Olhar IEPS* 2021; 1(3):1-14.
37. Leite A, Ramires A, Moura A, Souto T, Marôco J. Psychological well-being and health perception: predictors for past, present and future. *Arc Clin Psychiatr* 2019; 46(3):53-60.
38. Ross J, Field C, Kaye S, Bowman J. Prevalence and correlates of low self-reported physical health status among prisoners in New South Wales, Australia. *Int J Prison Health* 2019; 15(2):192-206.
39. Carvalho NGO. Política Nacional de Atenção Integral à Saúde das Pessoas Privadas de Liberdade no Sistema Prisional: Uma análise sobre a evolução normativa. *Cad Ibero-Amer Dir Sanit* 2017; 6(4):112-129.
40. Furtado AE, Oliveira MM, Herreira LF, Silveira KL, Camargo PO, Cunha KF, Weiss CV, Rodriguez MLB. Saúde mental de mulheres em privação de liberdade: a percepção delas. *Res Soc Dev* 2021; 10(11):e398101119820.
41. Kolodziejczak O, Sinclair SJ. Barriers and Facilitators to Effective Mental Health Care in Correctional Settings. *J Correct Health Care* 2018; 24(3):253-263.

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