

# Mental Health Screening of People Deprived of Liberty, Analyzed Through the Brief Jail Mental Health Screening (BJMHS) in Three Colombian Establishments

Tamizaje de Salud Mental de Personas Privadas de la Libertad, analizada por medio del Brief Jail Mental Health Screening (BJMHS) en tres establecimientos colombianos

Triagem de Saúde Mental de Pessoas Privadas de Liberdade, analisada através do Brief Jail Mental Health Screening (BJMHS) em três estabelecimentos colombianos

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## ABSTRACT

**Introduction.** People deprived of liberty, due to their condition and characteristics, suffer greater changes in their health than the general population, particularly in personality disorders, consumption of psychoactive substances, and suicidal tendencies. The prison system is aware of these risks, and universally, multiple approaches to the subject have been developed, as evidenced by the abundant literature, for its early detection. **Objective.** Apply the screening instrument, the Brief Jail Mental Health Screening (BJMHS) test, to a sample of people deprived of liberty upon admission to three Colombian prisons, to establish the prevalence of mental health in these

## Author Contributions

### MACG:

*Initiated the study and was responsible for its overall design.*

### GCM:

*Is an expert in his respective field, supporting the instrument's choice and the art review.*

### MACG and GCM:

*Critically discussed the design of the document.*

### MACG:

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### MACG and GCM:

*Implemented the writing of the manuscript.*

institutions. **Methodology.** The type of study was cross-sectional in a population of incarcerated individuals in three institutions, two Colombian prisons for men, and one for women, between 2019 and 2020. The final validated sample was 417 people, 22.3% women and 77.7% men, for mental health screening, applied to the admission of the population deprived of liberty in prisons. **Results.** The global prevalence of mental health was 46.0% with a 95% Confidence interval (41.3% to 50.8%) for the *Buen Pastor* prison; 46.2% with a 95% Confidence interval (35.9% to 56.6%), for the *Modelo* prison 51.5% with a 95% Confidence interval (43.0% to 60.0%); and for the *Picota* prison with 42.0% with a 95% Confidence interval (34.9% to 49.1%). A greater impact on mental health was found in people accused or convicted of crimes against sexual freedom, integrity and training, against public safety, and against the family. **Discussion.** Given the unique conditions of the prison population and the universality of mental disorders, early detection of their functional level and degree of impairment is indispensable. **Conclusion.** The prevalence of mental health found in Colombian prisons has a similar magnitude to the same populations in various parts of the world, showing greater reliability in men than in women.

### Keywords:

**Mental Health; Prisoners; Mass Screening; Mental Status and Dementia Tests; Public Health Surveillance; Social Work, Psychiatric**

## RESUMEN

**Introducción.** Las personas privadas de la libertad, por su misma condición y características, padecen mayores alteraciones en su salud que la población general, en particular con relación a los trastornos de la personalidad, consumo de sustancias psicoactivas, y tendencias suicidas. El sistema carcelario es conector de estos riesgos, y universalmente, se han desarrollado múltiples abordajes del tema como lo demuestra la abundante literatura, para su detección temprana. **Objetivo.** Establecer la prevalencia de salud mental y asociaciones de los factores de nivel educativo, edad, sexo, de la situación jurídica de las personas privadas de la libertad, a través del instrumento de tamizaje, *Brief Jail Mental Health Screening (BJMHS)* (Breve Evaluación de Salud Mental en la Cárcel), a una muestra de personas privadas de la libertad a su ingreso en tres centros carcelarios colombianos. **Metodología.** Estudio observacional de corte transversal en una población de tres cárceles de Colombia de los años 2019 y 2020, dos cárceles para varones, y una para mujeres. La muestra final validada, fue de 417 personas, 22.3% a mujeres y 77.7% a hombres, para el tamizaje en salud mental, aplicada al ingreso a los establecimientos carcelarios. **Resultados.** La prevalencia global de trastornos mentales fue de 46.0% con un Intervalo de Confianza de 95% (41.3% a 50.8%), para la cárcel Buen Pastor fue de 46.2% con un Intervalo de Confianza 95% (35.9% a 56.6%), para la cárcel Modelo 51.5% con un Intervalo de Confianza 95% (43.0% a 60.0%), y para la cárcel Picota con un 42.0% con un Intervalo de Confianza 95% (34.9% a 49.1%). Se encontró una mayor afectación en salud mental en personas sindicadas o condenadas por delitos contra la libertad, integridad y formación sexuales, contra la seguridad pública, y contra la familia. **Discusión.** Dadas las singulares condiciones de la población carcelaria y la universalidad de afectaciones mentales, es indispensable una detección temprana de su nivel funcional y grado de afectación. **Conclusión.** Se encontró una prevalencia de trastornos mentales en las cárceles de Colombia, de una magnitud consistente con similares poblaciones reportadas en la literatura universal, arrojando mayor relevancia en hombres que en mujeres.

### Palabras clave:

**Salud Mental; Tamizaje Masivo; Prisioneros; Pruebas de Estado Mental y Demencia; Vigilancia en Salud Pública; Asistencia Social en Psiquiatría**

## RESUMO

**Introdução.** Pessoas privadas de liberdade, pela mesma condição e características, sofrem maiores alterações em sua saúde do que a população em geral, principalmente em relação a transtornos de personalidade, consumo de substâncias psicoativas e tendências suicidas. O sistema penitenciário está ciente desses riscos e foram desenvolvidas, universalmente, múltiplas abordagens para a questão, como demonstrado pela abundante literatura, para detecção precoce. **Objetivo.** Estabelecer a prevalência da saúde mental e associações dos fatores escolaridade, faixa etária, sexo e situação jurídica de pessoas privadas de liberdade, através do instrumento de triagem *Brief*

*Jail Mental Health Screening (BJMHS)* (Breve Triagem de Saúde Mental na Prisão), a uma amostra de pessoas privadas de liberdade ao serem admitidas em três presídios colombianos. **Metodologia.** Estúdio observacional de corte transversal em uma população de três prisões da Colômbia dos anos 2019 e 2020, dois prisões para varões, e um para mulheres. A amostra final validada, foi de 417 pessoas, 22.3% para mulheres e 77.7% para homens, para a triagem da saúde mental, aplicada ao ingresso nos estabelecimentos penitenciários. **Resultados.** A prevalência global de transtornos mentais foi de 46.0% com um Intervalo de Confiança de 95% (41.3% a 50.8%); para o presídio Buen Pastor foi de 46.2% com um Intervalo de Confiança de 95% (35.9% a 56.6%); para o presídio Modelo 51.5% com um Intervalo de Confiança de 95% (43.0% a 60.0%); e para o presídio Picota 42.0% com um Intervalo de Confiança de 95% (34.9% a 49.1%). Foi encontrado um maior impacto na saúde mental em pessoas acusadas ou condenadas por crimes contra a liberdade, integridade e formação sexual, contra a segurança pública e contra a família. **Discussão.** Dadas as condições únicas da população prisional e a universalidade dos transtornos mentais, é essencial a detecção precoce do seu nível funcional e do seu grau de afetação. **Conclusão.** Foi encontrada uma prevalência de transtornos mentais nas prisões colombianas, de magnitude consistente com populações semelhantes relatadas na literatura universal, mostrando maior relevância em homens do que em mulheres.

**Palavras-chave:**

Saúde Mental; Prisioneiros; Programas de Rastreamento; Testes de Estado Mental e Demência; Vigilância em Saúde Pública; Serviço Social em Psiquiatria

**Introduction**

Prisons belong to what the anthropologist Goffman defined at the time, as a “total institution”, that is, a “place of residence or work, where a large number of individuals in the same situation, isolated from society for an appreciable period, share a daily routine, formally administered” (1).

As a result of their condition, persons deprived of liberty (PPL) depend on their caregivers in almost all aspects, a task that in the Colombian case falls on the combination of the National Penitentiary and Prison Institute (INPEC), responsible for security, and the Penitentiary and Prison Services Unit (USPEC), responsible for the food and health of the inmates. except for the 69 municipal and regional prisons (2), the prisons of the security forces, the police stations and the Immediate Reaction Unit.

Of the 191,383 individuals who comply with different types of security measures, as of February 2020, a total of 126,671 intramural persons (3) were counted, 40.16% accused and 59.84% convicted, 98% of whom were in charge of INPEC; 2% under the responsibility of the municipal and military authorities, distributed among 205 establishments, at an average rate of 617 individuals per center, in a range of 50 to 8,500 subjects, for a total of 194,859 people (3).

Among the aspects that must be covered for this population are the needs in terms of security (which is institutionally given greater importance), food and health care. The latter is our main interest here, which refers to the detection of mental health affectations, in favor of optimal care.

In the specific case of persons in the custody of INPEC in Colombia, the commitment to health is the responsibility of the USPEC, a unit that covers the majority of situations (92%), excluding the exceptional regimes (1%), and of a minority of prisoners with greater economic solvency or family support, who by maintaining their Health Promoting Entity (EPS). they are treated independently (7%) (Table 1).

**Table 1.** Status of health care for persons deprived of liberty (PPL) in INPEC prisons as of June 2020

Form of connection to the health service		
PPL Fund 2019 (%) (*)	Contribution(%)	Emergency regimes (%) (**)
92	7	1

(\*) It corresponds to the Consortium (USPEC).

(\*\*) National Police, National Army, Railways, etc.

**Source:** elaborated by the authors, Based on the Assurance Group of the Subdirectorate of Health Care of INPEC, June 2020.

When a person deprived of liberty enters prisons, a general physical examination must be carried out, as well as an interview with a psychosocial professional. This procedure, due to the insufficient specialized staff available and/or psychotechnical support tools, is often short or absent, especially in establishments that receive a large number of people daily.

With the growth of the population deprived of liberty, an effective and standardized evaluation is essential to identify those individuals who require greater attention, and who require an exhaustive psychological evaluation, since this action cannot be limited to an individual perception.

Previous studies have shown poor identification of individuals requiring treatment and found that only 32.5% of detainees with severe mental illness identified themselves upon admission to the prison (4).

In epidemiological terms, the above aspect refers to the study of the distribution and of health-related states or events (particularly diseases), and their application to the control of diseases and other health problems in the prison system (5). Colombia lacks a comprehensive map that accounts for the range of ailments suffered by prison inmates.

In certain cases, health professionals and/or officials associated with INPEC who work in the process of care or referral of persons deprived of liberty have specific empirical knowledge of these situations. However, the rotation of personnel, and/or the absence of a systematic study process, makes it impossible to have an updated global balance of the identification and assessment of medical and/or psychological entities (diagnoses), which would allow optimizing the accompaniment and programming the allocation of resources and professionals for the issue of health.

The health problems that afflict persons deprived of liberty in prisons incorporate cross-cutting aspects of the entire population (pulmonary diseases, cardiovascular diseases, HIV-AIDS, etc.), and other tributaries of the area, where the establishments are located, such as, for example, malaria or leishmaniasis, in territories with a warm climate. In addition, overcrowding, which in Colombia has been close to 50% (4), is a major factor in the morbidity and mortality of persons deprived of liberty (PPL) (2,6).

From this perspective and based on the fact that chronic diseases are responsible for 60% of deaths and 75% of global public health expenditure (7), it is reported that in Spain, for example, one out of every two prisoners has some type of chronic pathology.

### ***Mental disorders***

In the Colombian prison system, 3,468 individuals deprived of liberty are identified as having mental illness (92% men, 8% women), understood as:

... A syndrome characterized by clinically significant disturbances in an individual's cognitive, emotional, or behavioral aspects, which reflects a dysfunction in psychological, biological, or developmental processes of mental processes (8).

Around 150 subjects from 2.89% of the Colombian prison population with a clinical diagnosis are housed in the two existing Mental Health Units (USM) located in the La

Modelo National Prison in Bogotá, and in Villahermosa in the city of Cali (department of Valle del Cauca). In doing so, INPEC complies with the postulates of Law 1709 of 2014, which establishes that detention facilities must be available for those who cannot be charged with permanent or transitory mental disorders (8). The other subjects, who are not located in the two USMs, live in the courtyards with the other persons deprived of liberty, receiving their medication directly at their place of confinement (2).

There is a disparity between the frequency of mental disorders in the general population and that in the incarcerated population, which shows a deficient work of the detection filters in our prison system. In the 2003 National Mental Health Study, it is reported that 40.1% of the Colombian population between 18 and 65 years of age has suffered or will suffer at some point in their lives from a mental disorder (7). Likewise, the 2015 National Mental Health Survey in Colombia reports that ten out of every 100 adults between 18 and 44 years old, and 12 out of every 100 adolescents have a problem that suggests the presence of a mental disorder (8).

It is common to observe how a significant number of detainees with serious mental illnesses receive longer sentences, violate custody regulations more frequently, obtain more disciplinary reports, and demonstrate a higher risk of recidivism (9). Likewise, the growing population of prisoners with a high rate of disorders associated with addictive substances makes it difficult to manage the security of the prisons, and of those who are held or working there (guards, health personnel, psychosocial team, teachers, etc.) (10).

In prison practices, "mental health", understood as "a state of well-being in which the individual is aware of his or her abilities, can cope with the normal pressures of life, can work productively and fruitfully, and can contribute to his or her community (11) refers to the competent authorities, individuals with mental disorders, but not to its broader concept, in which factors such as culture, quality of life, physical or psychological conditions intervene. Thus, even when the convicted person or the accused has not been clinically diagnosed before his or her arrest, it is crucial to be able to establish whether there is the presence of mental health impairments in general terms, whether or not they are related to the crime.

In the United Kingdom, the proportion of mentally ill people convicted or prosecuted for the commission of a crime is 148 per 100,000, 737 per 100,000 in the United States, 118 in China, 615 in Russia, 350 in Ukraine, and 334 in South Africa. by observing the differences in the records, and the importance of finding the way to have real-time diagnoses and care (11).



Ahmed Youssef, detention health coordinator for the International Committee of the Red Cross for the Americas, noted that:

Humanitarian challenges in prisons abound as there is insufficient information collection that does not allow for adequate epidemiological surveillance. Not to mention the poor design of health systems in detention and the lack of supervision and monitoring of health care provision (12).

The follow-up referred to by the International Red Cross is essential to the extent that, although the first two phases of this process refer to the filter and the exhaustive diagnosis of the problems present, without subsequent accompaniment, all the work undertaken would be wasted.

***The use of psychoactive substances as a comorbidity factor***

The use of psychoactive substances (PAS) is often comorbid with other mental disorders or as a disorder itself, and is an important variable in the incidence of mental health. It is estimated that 44.8% of the PPLs have consumed psychoactive substances within the penitentiary, with a prevalence of 42.8% for cocaine, among which 5% would have started their consumption when deprived of liberty (13,14). This suggests that the majority of consumers (95%) enter the institution with the acquired problem (15,16). This is one of the most recurrent problems in the prison environment, which needs to be directed towards existing programs for this purpose.

The *Epidemiological Review* (17) reports that 71% of inmates use alcohol, 48% use illegal drugs, 37% use marijuana, 23% use cocaine, 10% use injectable drugs, and 10% use opiates. Another study, conducted in ten nations (Australia, Austria, England, France, Germany, Iceland, Ireland, the Netherlands, New Zealand, and the United States), with the participation of 18,388 sentenced and detained prisoners, established that the prevalence of substance use varies considerably in a range of 10% to 89% (18), yielding a wide variability, according to the context. Additionally, a report by the World Health Organization (WHO) notes that alcohol and other drugs were the precipitating factors in violent crimes, in 78% of cases, and 83% in crimes against property (18).

***Suicides***

The incidence of suicides among inmates is an important variable directly related to their mental health. This phenomenon is usually evaluated institutionally employing “suicide attempts” and “completed suicides” in the face of which the information available in Colombian institutions is evident in some aspects.

Suicidal tendencies are a reflection of affected mental health and require ensuring a sustained accompaniment over time to the individual to prevent future misfortunes. INPEC reported to the Ministry of Health for the year 2019, 301 suicide attempts (3) (Table 2), equivalent to a rate of 252 events per 100,000 individuals (own calculations), when for the entire Colombian population the measure was 36.08 per 100,000 inhabitants for 2017, seven times lower than that estimated for prisons. This is explainable by the sharp changes consistent with incarceration.

**Table 2.** Notifications of suicide attempts in INPEC establishments, 2019.

Months	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL
<b>Totals</b>	10	29	23	34	25	35	22	29	29	24	17	24	301

Source: INPEC 2020.

The initial stage of incarceration (one to five months) is the period with the highest risk for the appearance of suicide attempts (41.7%), which may be related to the affective and emotional maladjustment that fragments the inmate’s usual life, “in terms of their interpersonal and intrapersonal relationships, where positive communication is absent, and moral stress and psychological tension are evident” (3).

These evaluated situations originate, among others, in depressive disorders (35.4%), affective disorders (9.1%), and the abuse of psychoactive substances (6.6%), where

forced confinement increases the unfortunate events that lead to the death of a greater number of subjects than in conditions of freedom (Table 3).

Perhaps one of the most delicate issues in prison health issues is this problem, in which an initial evaluation is often the only opportunity to identify it, with the subject being subject to the daily variables of a punitive and deprivation system, which generates feelings of hopelessness. Assessment of suicidal behavior is required in all prison institutions, as it is universally recognized that the stress of

incarceration, associated with the feeling of helplessness and inadequacy, is a clear precipitant of suicidal behavior.

**Table 3.** Psychiatric disorders related to suicide attempt (general population)

Associated psychiatric disorders	Cases	%
<b>Depressive disorder</b>	6689	35.4
<b>Other affective disorders</b>	1715	9.1
<b>Psychoactive substance abuse</b>	1253	6.6
<b>Other psychiatric disorders</b>	635	3.4
<b>Schizophrenia</b>	323	1.7
<b>Bipolar disorder</b>	518	2.7

Source: Ministry of Health 2018.

A study published in *The Lancet* (19) based on information collected in 24 high-income countries in Europe, Australia and North America, revealed 3,906 suicides between 2011 and 2014, 93% men and 7% women. The Nordic countries had the highest percentage with more than 100 suicides per 100,000 inhabitants, followed by France and Belgium with close to 100 per 100,000 inhabitants.

Australia and North America, respectively, had 23 to 67 suicides per 100,000 population. The suicide rate compared to the general population was three times higher in men and nine times higher in women (19), which is important to note, since the distinctive behavior of this variable among representatives of the female sex is more common.

### *Where to go*

It is therefore necessary to establish a screening system of brief application, simple, reliable, and hopefully free of cost, which allows identifying, as soon as they enter the system, those individuals who require a more detailed evaluation, to refer them to clinical personnel, trained in psychological diagnosis, to provide them with the appropriate treatment for their circumstances.

The insufficient personnel available and trained for the application of complex psychotechnical tests, the high number of PPLs that arrive daily at the reestablishments, the insufficient economic resources available for the implementation of complex initial bonding processes, and the imperative need to have an effective means of filtering, make up four factors to consider when defining the mechanism to be chosen.

In this search for an appropriate screening test for prison institutions in a literature review, four questions were taken into account to guide the study: 1) What is the sensitivity and specificity of the test in the population of interest, 2) do they work similarly concerning sex and/or ethnicity, and 3) they work equally well in detecting serious mental illness (psychotic conditions, depression), and other mental disorders, in short- and long-term detention centers (4,20).

A review of the literature showed a high percentage of use in prisons, both in North America and Europe, thus providing a highly practical and useful work tool for INPEC and USPEC in their work of custody, surveillance and care of the people in their care (21,22). The main objective of this study was to establish the prevalence of mental health using the screening instrument, the Brief Jail Mental Health Screening (BJMHS) Test, in a sample of persons deprived of liberty upon admission to three Colombian prisons. In addition, we sought to establish possible associations between the factors of educational level, age, the legal status of persons deprived of liberty, crimes committed (or presumed to have been committed), sex, belonging to the indigenous ethnic group, imprisonment, and the presence of disability concerning mental health (23).

This work was implemented jointly by INPEC, through its Directorate of Care and Treatment, El Bosque University and the Office of the Attorney General of the Nation, because the exercise corresponds to a function inherent to the obligations of INPEC and USPEC, to guarantee the right to health and the needs of inmates as established by Law 1709 of 2014 and taking into account the ethical aspects (23,24), and respect for differential treatment and self-recognition of a certain condition, as stipulated in the regulations of the National Penitentiary and Prison Institute. Within this framework, the ethical considerations inherent to the work carried out here were respected and complied with.

## **Methodology**

The type of study was observational and cross-sectional in a population of three prisons in Colombia in 2019 and 2020. Inclusion criteria were being of legal age and being a member of a trade union or a convicted person, and exclusion criteria were being under the consumption of alcohol or drugs, not accepting cooperation with the study or difficulties in understanding the questions.

The sampling was non-probabilistic, with a sample size of 417 participants, distributed as follows: Prison 1=93 [22.4%; Good Shepherd Prison (women)], Prison 2=136 [32.6%; La Modelo National Prison (men)], and Prison 3=188 people [45.1%; ‘La Picota’ Metropolitan Prison and Penitentiary Complex (men)] (25). The sample size

calculation was obtained with a population of 15,500 people, an expected proportion of 50%, an accuracy of 5%, and a reliability of 95%, with an expected sample size of 375 people (26).

The variables studied in connection with the screening instrument were: sex, age, legal status, disability, membership of an indigenous group, prison, education, crimes, and history of mental health treatment (27). These allowed us to provide a first context and a general characterization of the population under study (28).

*The Brief Jail Mental Health Screen (BJMHS)* scale was used for mental health screening. This test was developed in 2005 by the American Psychiatric Society in response to the massive number of individuals arrested and diagnosed with mental disorder in 2003 (900,000 out of 13,000,000), by Henry J. Steadman with financial support from the U.S. Department of Justice. The instrument consists of eight questions to detect that a person has mental health problems, which has been validated in numerous prisons around the world (29).

For the concept to be meaningful, the test must yield positive answers in four of the first six questions or positive answers in question 7 or question 8. Questions 1 and 2 are aimed at detecting problems in the thinking style most common in psychotic problems. Question 3 is aimed at identifying symptoms compatible with affective disorders, as well as questions 4, 5 and 6, which seek to corroborate these behaviors in people close to the individual. Question 6 gives the individual the opportunity to express his or her observations on the affective aspects. Questions 7 y 8 are directed at previous histories of mental disorders.

According to the measurements made, this instrument has a sensitivity of 74% to identify mental problems in men, and 54.9% to identify women with mental disorders not previously identified (30). It should be noted that the test was translated by the Dean of the Faculty of Psychology of El Bosque who developed studies in Canada, and by a Colombian psychiatrist with specialization studies in Psychiatry and a subspecialty in forensic psychiatry, together in the United States and with experience of more than 25 years in the local, state and federal prison systems.

In order to proceed with the application of the screening instrument and the collection of information, a psychologist was selected jointly with INPEC for each of the selected prisons. This group of professionals was trained in the use of the *Brief Jail Mental Health Screen (BJMHS)*, with the indication that it should be applied to all persons deprived of liberty received in each prison, either by transfer from another facility or by their recent capture.

Notwithstanding the foregoing, it should be noted that the interview and the evaluation of admission to prison are a procedure pre-established by INPEC, to assign yards and modalities of care, following the profile of each subject, and guaranteeing adequate care. This procedure was carried out between the end of 2019 and the beginning of 2020, in accordance with the income of each prison.

Microsoft Office version 365 was utilized and analyzed in the social science program SPSS vs22. Quantitative variables were studied using absolute frequencies and relative percentage frequencies. Pearson's chi-square test was used to determine associations, and the disparity ratio (RD) was used to determine risk. The confidence intervals were 95% and the significance level was 5%.

Concerning the ethical and legal aspects, given the requirements of the prison institutions, institutional endorsements were obtained while respecting the anonymity of the participants and maintaining confidentiality, even though, as it is an administrative requirement, written informed consent is not considered necessary, but the verbal does (24).

This proposal was promoted within the framework of the Freedom Project of the Office of the Deputy Attorney General for the Public Prosecutor's Office in Criminal Matters, which aims to optimize the administration of justice and the processes directly or indirectly related, in alliance with the Universidad del Bosque, to make contributions that in the medium term can improve mental health care for persons deprived of liberty.

## Results

Males were predominant, with a majority of members under 35 years of age, and 4.9% reported having a disability. Concerning the legal situation, the convicted person predominated. Similarly, in all establishments, an association of crimes with mental disorders was found (BJMHS Scale) ( $p < 0.05$ ) (Table 4).

The significant crimes with the screening for mental disorder, according to the history of criminal records, were those against sexual freedom, integrity and education with a risk of 4.8 (RD) (95% CI; 1.73-13.86) for mental health, and for public safety, being protective for mental health 0.33 (RD) (95% CI; 0.17-0.65), compared to the rest of the crimes. Crimes against the family showed a high impact on mental health, with a risk of 3.8 (RD) and 95% (CI); 0.98-14.65), which, although not significant, was close to being significant. When performing the multivariate analysis with covariates of criminal history, only the antecedent Sexual freedom, integrity and education was reported as significant with a risk of 4.5 (RD) (95% CI; 1.18-16.96)

The persons deprived of liberty were found, among others, linked from the highest to the lowest, for crimes against economic property, against public security, against public health, for crimes against life and personal integrity, for

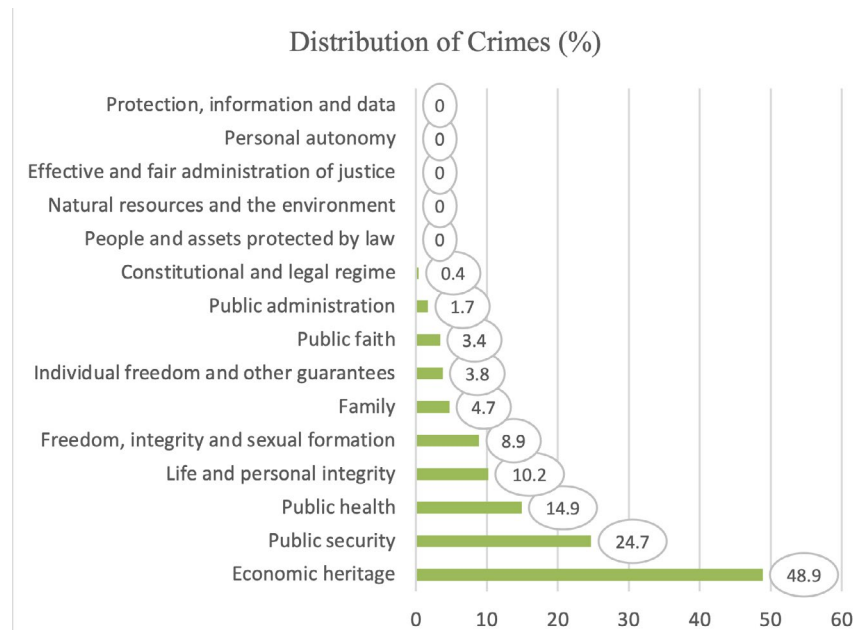
crimes against sexual integrity and education, and against the family (Figure 1), showing great similarity with the distribution of crimes in the prison environment.

**Table 4.** General Characteristics of Persons Deprived of Liberty

Mental illness (BJMHS)		Total		YES		NO		Value P
		N	%	N	%	N	%	
<b>Gender</b>	Masculine	324	77.7	149	46.0	175	54.0	0.966
	Feminine	93	22.3	43	46.2	50	53.8	
<b>Disability</b>	Yes	20	4.9	13	65.0	7	35.0	0.080
	No	389	95.1	175	45.0	214	55.0	
<b>Indigenous</b>	Yes	3	.08%	2	66.7	1	33.3	0.460
	No	388	99.2	176	45.4	212	54.6	
<b>Prison</b>	Buen pastor	93	22.3	43	46.2	50	53.8	0.242
	Modelo	136	32.6	70	51.5	66	48.5	
	Picota	188	45.1	79	42.0	109	58.0	
<b>Education</b>	None	7	2.9	6	85.7	1	14.3	0.51
	Grades 1,2,3	22	2.9	8	36.4	14	63.6	
	Grades 4,5	29	12.0	12	41.4	17	58.6	
	Grades 6,7	33	13.7	13	39.4	20	60.6	
	Grades 8,9	52	21.6	24	46.2	28	53.8	
	Grade10	18	7.5	8	44.4	10	55.6	
	Grade 11	69	28.6	29	42.0	40	58.0	
	Superior Incomplete Complete	11	4.6	4	36.4	7	63.6	
<b>Legal Status</b>	Syndicated	102	45.5	42	41.2	60	58.8	0.557
	Convicted	122	54.5	55	45.1	67	54.9	
<b>Crimes</b>	Life and personal integrity	24	10.2	8	33.3	16	66.7	0
	Persons and objects protected by international humanitarian law	0	0.0	0	0.0	0	0.0	
	Individual liberty and other guarantees	9	3.8	2	22.2	7	77.8	
	Freedom, integrity and sexual formation	21	8.9	16	76.2	5	23.8	
	Family	11	4.7	8	72.7	3	27.3	
	Economic heritage	115	48.9	46	40.0	69	60.0	
	Public faith	8	3.4	2	25.0	6	75.0	
	Natural resources and environment	0	0.0	0	0.0	0	0.0	
	Public safety	58	24.7	14	24.1	44	75.9	
	Public health	35	14.9	19	54.3	16	45.7	
	Public administration	4	1.7	2	50.0	2	50.0	
	Effective and upright administration of justice	0	0.0	0	0.0	0	0.0	
	Constitutional and legal regime	1	0.4	1	100	0	0	
	Personal autonomy	0	0.0	0	0.0	0	0.0	
	Protection, information and data	0	0.0	0	0.0	0	0.0	
<b>Age</b>	< 35 years	180	52.2	75	41.7	105	58.3	0.35
	≥ 35 years	165	47.8	77	46.7	88	53.3	

Source: elaborated by the authors.





**Figure 1.** Distribution of Crimes  
**Source:** elaborated by the authors.

Concerning the BJMHS scale questions, people more frequently reported gaining or losing about a pound per week, without trying (Question 3); they also expressed that in recent weeks they have felt worthless or sinful

(Question 6), and that they have felt that they have to speak or move more slowly than they usually do (Question 5). No statistical association was found between the questions of the questionnaire concerning sex ( $p>0.05$ ). (Table 5).

**Table 5.** BJMHS Questions Applied to Persons Deprived of Liberty in Bogotá

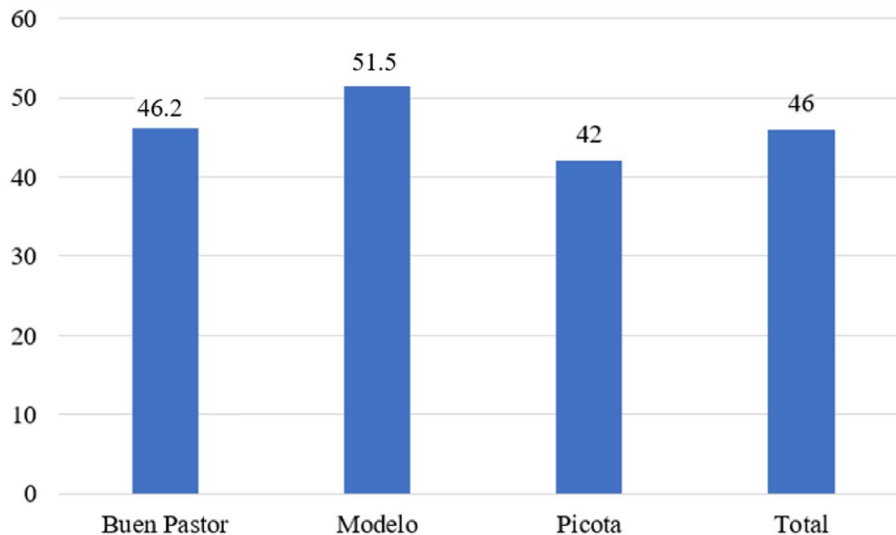
Questions BJMHS		Gender						Valor p
		Total		Masculine		Feminine		
		n	%	n	%	n	%	
1. Do you currently believe that someone can control their mind by putting or removing thoughts in their head?	No	375	89.9%	290	89.5%	85	91.4%	0.593
	Yes	42	10.1%	34	10.5%	8	8.6%	
2. Do you currently feel that other people know your thoughts and can read your mind?	No	400	95.9%	310	95.7%	90	96.8%	0.638
	Yes	17	4.1%	14	4.3%	3	3.2%	
3. Have you gained or lost about a pound of weight a week lately without trying?	No	188	45.1%	147	45.4%	41	44.1%	0.826
	Yes	229	54.9%	177	54.6%	52	55.9%	
4. Have your family or friends told you that you are currently much more active than you usually are?	No	359	86.1%	277	85.5%	82	8.2%	0.511
	Yes	58	13.9%	47	14.5%	11	11.8%	
5. Do you currently feel that you have to speak or move more slowly than you usually do?	No	303	72.7%	230	71.0%	73	78.5%	0.152
	Yes	114	27.3%	94	29.0%	20	21.5%	
6. In the last few weeks have you felt that you are worthless or sinful?	No	293	70.3%	234	72.2%	59	63.4%	0.102
	Yes	124	29.7%	90	27.8%	34	36.6%	
7. Are you currently taking any medications prescribed by a doctor, for emotional or mental health problems?	No	396	95.0%	307	94.8%	89	95.7%	0.713
	Yes	21	5.0%	17	5.2%	4	4.3%	
8. Have you ever been hospitalized for emotional or mental health issues?	No	394	94.7%	308	95.4%	86	92.5%	0.274
	Yes	22	5.3%	15	4.6%	7	7.5%	

**Source:** elaborated by the authors.

## Mental Health Prevalence (BJMHS Scale)

The prevalence of mental health impairments in all facilities, according to the BJMHS scale, was 46.0% with a CI of 95% (41.3% to 50.8%) (sampling error of 5.3%,

good quality), for the Buen Pastor prison it was 46.2% with a 95% CI (35.9% to 56.6%), for the Modelo prison 51.5% with a 95% CI (43.0% to 60.0%), and for the Picota prison with 42.0% with a 95% CI (34.9% to 49.1%) (Figure 2).



**Figure 2.** Prevalence of Mental Health by Total and Prison (BJMHS Scale)  
**Source:** elaborated by the authors.

In consideration of the fact that the instrument was not generated under the auspices of Colombian cultural biases, the presence of an influence of magical-religious thinking is observed among the inmates, and with greater emphasis among the representatives of the female sex, which could generate some minor alterations in the responses.

This is reflected in particular in Question 1 (“Do you think that someone can control his mind by putting or taking away thoughts in his head?”) (with a 1.5% difference in favor of women over men), when some people correlate “that control” with a divinity or a force of nature. In Question 6 (“In the last few weeks have you felt that you are useless or sinful?”) (with an 8.8% difference with the representatives of the male sex), where the term “sinner” acquires a socio-religious representation, in a context where Catholic dogma has a great weight in the collective imagination

This is because a negative response may not necessarily imply a clinical diagnosis in the subject, but rather a cultural conviction (Table 7). Hence the importance of carrying out the respective analyses in context, and considering the different factors involved. In this way, and although the qualitative responses collected were not present in all cases, and, therefore, are not always significant and/or illustrative, they reinforce this finding, making evident the importance of clarifying the nature of the questioner, and of the answer, at the time of applying the instrument to the population of interest. In this context, and by contrast, only the qualitative response “Someone within himself” (Table 8) points to

aspects far from any cultural influence, and more focused on a possible disorder, especially by those who said they had it.

Question 2, when referring to the possibility that a third party can “read the mind” of the interviewee, shows a smaller percentage of the total sample that refers its answer to “sorcerers” and “the dead”, clearly alluding to personal beliefs and convictions (Table 6). This confirms the importance of considering the cultural factor, referred to above, without ruling out that it can also sometimes disguise mental or behavioral affectations, as they are voluntarily concealed by the interested party.

**Table 6.** Qualification of Question 1 of the Brief Jail Mental Health Screen questionnaire. “Do you currently believe that someone can control one’s mind by putting or removing thoughts in his or her head?” by the Persons deprived of liberty (PPL) evaluated when the answer was yes.

Items	%
Family (*)	53.33
Third party (**)	40
Someone inside himself	6.67
<b>Total</b>	<b>100</b>

(\*) Spouse, children, mother, father, others; (\*\*) Indeterminate, another PPL, YouTube, etc.

**Source:** elaborated by the authors.

Regarding the questions of increasing and decreasing the weight and behavioral activity of the inmates, the answer is often related to stress, resulting from having been detained in the Immediate Reaction Units (URI, of the Attorney General’s Office, or in the Police Stations), before being brought to the prison establishment. or with their prolonged stay in prison, making evident the effect of imprisonment, since many have not had the opportunity to talk to their relatives, or to receive frequent visits, among other aspects (Table 7). This question acquires significant value for subsequent evaluations, since its main objective is to identify changes in the affective and/or motivational spheres.

**Table 7.** Qualification of Question 2 of the *Brief Jail Mental Health Screen* questionnaire. “Do you currently feel that other people know your thoughts and can read your mind?” by the Persons deprived of liberty (PPL) evaluated, when the answer was yes.

Items	%
Sorcerers and the Dead	40
Third party	40
Fathers / mothers	20
<b>Total</b>	<b>100</b>

Source: elaborated by the authors.

**Table 8.** Qualification to the question “Have your family or friends told you that you are currently much more active than you usually are?” by the Persons deprived of liberty (PPL) evaluated when the answer was affirmative.

Items	%
Because of the guilt (*)	45.65
Because of anxiety	10.87
Because of the running of the bulls	10.87
Due to the consumption or withdrawal from consumption of psychoactive substances	10.87
By the environment	4.35
Due to inactivity	4.35
Due to the judicial situation	4.35
Not having family visits	2.17
To think about	2.17
By epilepsy	2.17
Loss of work	2.17
<b>Total</b>	<b>100</b>

(\*) For the commission of the crime, for failing God.

Source: elaborated by the authors, total interviewed population.

Referring to the results of Question 7 (“Are you currently taking any medication prescribed by a doctor for emotional or mental health problems?”) (If total = 5%) and Question 8 (“Have you ever been hospitalized for emotional or mental

health problems?”) (If total = 5.3%), and when compared with Question 1, it can be inferred that persons deprived of liberty with a disorder range between 5% and 10%, which is in line with international records (28) (Table 7). For the sample studied, the point data is 8.9% of inmates, with a confidence interval of 6 – 11.7%. These subjects correspond to those who may require medication:

(...) the Commission for Psychiatric/Therapeutic Services of the Penitentiary System of the Spanish Ministry of Justice conducted a survey of directors of penitentiary institutions in the Netherlands. The results show an estimate of 10% of prisoners with serious mental problems, whose behavior is related to mental disorders (5).

The calculation of the prevalence of mental health (Figure 2) shows that, according to the screening test, between 42% and 51.5% of the prison population could suffer from some mental health difficulty. The comparison of this information with the previous data shows us, subtracting the 10% of inmates presumably medicable, that we could expect between 32% and 41.5% of inmates who suffer from some mental health difficulty that merits accompaniment.

With regard to Question 4 (“Have your family or friends told you that you are currently much more active than you usually are?”), the qualitative responses confirm the presence of a representative sector of psychoactive substance users in the study population. The proportion cannot be established utilizing the instrument, since this is not its function, but it does allow the identification of the problems of interest, for their subsequent evaluation and attention, considering that this behavior could evolve into states of frank agitation.

Question 8 (“Have you ever been hospitalized for emotional or mental health problems?”) makes it possible to make visible and ratify, but not to have a reliable statistical proportion, the incidence of suicidal intent in prisons. The top three causes of hospitalization reported by prisoners are, in descending order, suicide attempts, psychoactive substance use, and depression.

Although it does not constitute a rule applicable to all crimes, in the case of PPL for crimes against sexual freedom, integrity and education, a greater affectation of mental health was found, which hopefully in the future will be confirmed and more widely documented.

## Discussion

In the Colombian case, a similar behavior is observed in the test in women and in that of men, since no significant and/or large differences were found for the different variables considered associated with sex.

It should be clarified, however, that representatives of the female sex, as a result of their confinement, tend to suffer higher rates of abandonment by their respective romantic partners than men deprived of liberty, as well as affectations due to the helplessness of their children, especially the youngest. The comments collected in the application of the instrument, the experience acquired in years of work in prisons, and the existing literature, confirm that the incarceration of mothers has a direct impact on the children of prisoners, among which the entry into the world of crime, associated with the dismemberment of the family (25).

From a mental health perspective, this is an aspect that has immediate and long-term implications, often evidenced by high levels of anxiety, which can be somatized in different ways. In the application of the screening test, the presence of this factor became evident in the majority of women who are mothers, and especially in those who are heads of household. However, this reference is not the only possible explanation for the effects observed in this population but rather forms an important variable that is maintained throughout the incarceration.

The level of education observed shows that 71.4% of the interested parties have completed between sixth grade and eleventh grade, with 4.6% having some level of university education and 7% having none, compared to 58%, 1.2% and 4.8%, respectively, of the total prison population (15) (Table 1). The ranges obtained, in addition to giving reliability to the sample, should be read without losing sight of the fact that the INPEC statistics refer to the entire population deprived of liberty in the prison environment at the national level, without being restricted to the three establishments contemplated in this study. The variable “education”, although relevant in the characterization of the population of interest, does not show a significant dependence concerning the “mental health” factor.

## Conclusions

The results obtained in the application of the *Brief Jail Mental Health Screen (BJMHS)* Scale in Colombian prisons, yield conclusions that, in general terms, allow us to confirm what has been found in other latitudes, and in this way, give it free rein for its use and application in the national territory, for the benefit of persons deprived of liberty. and the administration of these centers.

Aspects of relevance were presented in its development, as well as certain limitations, specific to our population that deserve to be referenced, and others of lesser importance that, in the future, could be perfected through the development of a new exercise of the same nature, hopefully of greater specialization; Its function would be

to deepen the use of the instrument and the interpretation of its results.

The exercise implemented here with the chosen screening test (BJMHS), for its application in the prison environment, with the ultimate purpose of supporting the referral and care of persons deprived of liberty at the time of their arrival at detention facilities and with mental health difficulties, is a first step to enable its use in the Colombian context, with the obligation to make the pertinent adjustments in the future, if necessary. However, some suggestions and recommendations for future development are worth making:

- It would be desirable to be able, in the near future, to guarantee the cross-referencing of the results obtained from the screening test with the mental health information available from INPEC and USPEC, as well as with SISIPPEC (INPEC’s information system), since on that occasion this option was not possible. This is relevant to the extent that the subjects who are received in primary schools are sometimes referred from other prisons or are repeat offenders and could have a documented mental health history in the institution.
- It is necessary to expand the work implemented on this occasion in the application of the test, due to the cultural aspects found. This could be carried out through the consequent systematization of the tests applied, and their parallel analysis, which is why it is important to organize a real-time monitoring route throughout the national territory.
- Although the chosen instrument is easy to understand and apply, the failures observed in this exercise in three Colombian prisons showed the importance of providing basic guidance to those who are going to apply it.
- The screening test should not be applied by trainees in the prison establishment, nor by members of the guard, except in particular situations over which there is control, and a guarantee of an adequate application of the instrument. It is expected that health, behavioral, or social professionals will be able to perform it, taking advantage of the initial interview that is usually done for newcomers.
- The use of the *BJMHS* should not be considered as a diagnostic tool or as a solution to all the difficulties in the identification of mental disorders, since no filter is perfect, nor is it free of error. Like any evidence of this nature, the *BJMHS* has an acceptable range of errors that must be considered, so occasionally some situations will not be perceived, at least in their real dimensions.



- It is important to consider that, once accepted for implementation, to obtain the benefits of this minimum standard, follow-up constitutes the most important factor in the management as well as in the treatment of persons identified with mental disorders. This implies that once there is a suspicion of an emotional disorder that requires a more detailed evaluation of the detainee, the availability of an expert becomes a priority.

## Conflicts of Interest

The authors of this manuscript declare that there are no conflicts of interest in the development of this research.

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## Ethical Responsibilities

Confidentiality of the data: the authors declare that they have followed the protocols established by IMPC for the development of the research.

Right to privacy: Authors have obtained verbal consent. Institutional endorsement was obtained, this document is in the possession of the corresponding author referred to in the article.

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