

# Relationship between hopelessness and suicide risk in Colombian prison population in preventive detention

## Relación entre desesperanza y riesgo suicida en población reclusa colombiana en detención preventiva

Carlos J. Quintero-Cárdenas<sup>1,3</sup>, Leidy R. León-Gamboa, Paula M. Romero-Charry<sup>3</sup>, Laura D. Cantor-González<sup>3</sup>, María A. Salamanca-Callejas<sup>3</sup> y Cristian F. Rico-Martínez<sup>2</sup>

\*Correspondencia:

Carlos J. Quintero Cárdenas  
carquintero@unal.edu.co

RECIBIDO: MAYO 2023 | PUBLICADO: DICIEMBRE 2023

### Abstract

**Background:** Suicide is a public health problem of important consideration, and in the prison system it is one of the most frequent causes of death. **Objective:** To determine the level of suicide risk and hopelessness in Colombian inmates in preventive detention, and their possible relationship. **Method:** The present study is quantitative, with a comparative-correlational design, and an associative, descriptive, and non-experimental strategy. The participants were 100 Colombian inmates, aged between 18 and 65 years, who were in preventive detention. The sample was divided into two groups by age, and into two groups according to time in prison, this for the general analysis. The Beck Hopelessness Scale and the Plutchik's Suicide Risk Scale were administered. Descriptive, frequency, comparative and correlational analyses were developed. **Results:** hopelessness and suicide risk varied by age and length of incarceration, but without statistically significant differences ( $p < .05$ ). Moderate, positive, and significant correlation between variables ( $Rho = .59$ ;  $p = .04$ ). **Discussion and conclusion:** The results suggest implementing adequate psychological assessment processes for these variables, and an adequate and constant accompaniment of persons detained for the first time in preventive detention.

**Keywords:** Hopelessness, Suicide risk, Inmates, Preventive prison, Prison system.

### Resumen

**Antecedentes:** El suicidio es un problema de salud pública de importante consideración, y en el sistema carcelario es una de las causas de muerte más frecuentes. **Objetivo:** Determinar el nivel de riesgo suicida y desesperanza en reclusos colombianos en detención preventiva, y su posible relación. **Metodología:** El presente estudio es cuantitativo, con diseño comparativo-correlacional, y una estrategia asociativa, descriptiva y no experimental. Los participantes fueron 100 reclusos colombianos, con edades entre 18 y 65 años que estaban detenidos de forma preventiva. La muestra se dividió en dos grupos por edad, y en dos grupos según el tiempo en prisión; esto para el análisis general. Se les administró la Escala de Desesperanza de Beck y la Escala de Riesgo Suicida de Plutchik. Se desarrollaron análisis descriptivos, de frecuencia, comparativos y correlacionales. **Resultados:** desesperanza y riesgo suicida que varía según la edad y el tiempo de encarcelamiento, pero sin diferencias estadísticamente significativas ( $p < .05$ ). Correlación moderada, positiva y significativa entre las variables ( $Rho = .59$ ;  $p = .04$ ). **Discusión y conclusión:** Los resultados sugieren implementar adecuados procesos de evaluación psicológica de estas variables, y un adecuado y constante acompañamiento a las personas detenidas por primera vez en detención preventiva.

**Palabras claves:** Desesperanza, Riesgo suicida, Reclusos, Prisión preventiva, Sistema carcelario.

1 Universidad Nacional de Colombia

2 Universidad INCCA de Colombia

3 Universidad Manuela Beltrán



## INTRODUCTION

Suicidal behavior is a multifactorial act, involving biological, social, cultural, socioeconomic and psychological factors. This is executed once difficulties arise in the subject's adaptive mechanisms to cope with environmental demands that produce emotional stress (Romero et al., 2018). Because of the above, it is now considered an international public health problem that is gradually and widely increasing (World Health Organization - WHO, 2021). According to this same organization, this behavior must have certain characteristics to be considered as a completed suicide: 1) performing an act that entails a consequence at the end; 2) act committed deliberately by a subject; 3) knowledge about the result of behavior, i.e., death; and 4) the expectation of imminently cessation of an unbearable situation. Regarding this last characteristic, García (2017) points out that suicidal behavior can be considered as a way out of a disordered life with multiple problems derived from everyday life, where the subject describes it as unsatisfactory, empty and meaningless.

As regards its prevalence, the WHO (2021) presents that about 703.000 people die each year for because of this cause, which corresponds to one death every 40 seconds; with this, is it presumed that deaths by suicide are greater than those of people who are murdered. Suicide rates increased by 17% between 2000 and 2019, with 77% of cases occurring in low and medium income countries (WHO, 2021). For the year 2019, more than 700.000 people committed suicide, i.e., 1 every 100 deaths (WHO, 2021). According to international studies, suicide represents a morbidity of 1.4%, being this, one of the highest rates registered in Eastern Europe, and one of the lowest in Latin America among young people aged 15 to 25 years (Rendón-Quintero & Rodríguez-Gómez, 2016).

For Colombia, in accordance with the Integrated Social Protection Information System (SISPRO), for the period between 2009 to 2016 the suicide rate increased year after year from 0.9 per 100.000 inhabitants in 2009 to 36.08 per 100.000 inhabitants between 2016 to 2017 (Ministry of Health and Social Protection,

2018). The National Administrative Department of Statistics - DANE (2021) refers that in Colombia the mortality rate by suicide has increased over time; it went from 5.1 per 100.000 inhabitants in 2005 to 5.9 in 2019. Among cities such as Bogota, Medellin and Cali, cases of suicide were registered where the majority were population between the ages of 12 to 49 years (Ministry of Health and Social Protection, 2018). Through SIMVIGILA (Public Health Surveillance System), in Colombia, 26.202 cases of attempted suicide were reported in 2020, representing an incidence rate of 52 per 100.000 inhabitants (Ministry of Health and Social Protection, 2018). These attempts occurred in greater proportion in women (61.5%), in municipal capitals (81%); hanging/suffocation was a mechanism used in greater proportion by men (4.7% versus 3.1% in women) (National Institute of Health, 2022). By 2022, in capital cities such as Bogota, 399 suicides were reported, which constitutes an increase of 6.7% when compared to 2021 (National Institute of Legal Medicine and Forensic Sciences, 2022); the estimated rate is 5 suicides per 100,000 inhabitants (Ministry of Health, 2022) and the population that contributes most cases to these statistics are those between 29 and 59 years of age, with a percentage of 29.35%.

One of the populations that has currently shown an increase in the prevalence rates of suicidal behaviors is that deprived of their personal liberty in prisons and/or penitentiary (PDPL), due to the influence of numerous factors and the psychological impact of a stay in prison (Alcántara-Jiménez et al., 2023). Research in Colombia reports a higher percentage rate of suicide among prisoners without sentence (7.5%) than among convicted prisoners (6.1%) (Serrano et al., 2020). In that regard, and as indicator of the magnitude of the problem, an approximate figure of 10.771.204 PDPL is globally reported for the year 2021 (World Prison Brief & Institute for Criminal and Justice Policy Research, 2021), and for countries such as Colombia, for today, according to the National Penitentiary and Prison Institute - INPEC (2023), a total of 101.084 PDPL remain, of which 24,187 are accused with intramural security measures; most of them are located in the central region of Colombia (7,616), and Bogotá alone

accounts for 1,764 of the total. In accordance with WHO (2000), in the beginning of this century, the suicide rate was 88/100.000, and the factor of incarceration was found to be one of the factors that caused the increase of this behavior, mainly in the population aged between 25 and 34. For people under 21 years of age, a suicide rate eight times higher than that of adults aged 25-34 years is reported (Cook, 2013).

Fazel et al. (2017), in their research, found that approximately 3.906 suicides occurred in prisons between 2011 and 2014 in 24 countries. According to sex, statistics from this research report 2.607 (93%) suicides in males and 203 (7%) suicides in females. Likewise, it is reported that six countries reached to have figures above 100 per 100.000 prisoners: Norway, France, Belgium, Portugal, Sweden, and Finland (Fazel et al., 2017). For countries such as England and Wales, the rates associated with suicidal behavior, specifically in women, are 20 times higher than in the general population, thus reaching the highest level in the rate of suicides in prison for the year 2016 (Fazel et al., 2017). For western countries, the reported statistics also support a high significance; specifically, in the United States, suicide is the third leading cause of death in prisons; and for Canada, the rate of suicide in prison is three times higher than that of the general population (Botero, 2019).

There are several factors that link these context with the development of suicidal behaviors: the first is social, and it is associated with interpersonal relationships with people who have a mental disorder, psychoactive substances abuse or suicidal behavior record; the second, related to life in the prison, in the testing of the people coping capacities of the PDPL, where in light of their dysfunctionality, feelings of hopelessness, distress, fear and uncertainty occur (Anbesaw et al., 2022; Marzano et al., 2016). To these factors are added the psychoactive substances use, the receipt of a sentence, judicial decisions, lack of leisure, death or illness of a family member, separation from relational contexts and ties, the presence of psychopathologies and the prison admission itself (Larrotta-Castillo, 2014; WHO, 2007).

It is important to note that according to the above,

the risk of suicide in the prison population seems to be higher than that of the general population; its rates are between 11 and 14 times higher (WHO, 2007). For authors such as Illana (2021) the stay in prison can be considered a traumatic event for the person, since there are different situations there that can trigger intense emotions; some examples of these are the authoritarian style by the prison guard and custody staff, the absence of loved ones and the high degree of uncertainty about the future; the latter is identified as generating high levels of stress (Illana, 2021). For this reason, and for additional variables considered in other studies, Lombeyda (2015) describes the condition of imprisonment as a triggering factor of anxious and depressive symptomatology in the population deprived of liberty.

Regarding hopelessness as a risk factor, it has been described as a trigger of suicidal behavior, since it is represented through a negative perspective towards the future (Jiménez & Linero, 2015), i.e., as a psychological state to which a person can arrive as a result of an experiential practice, which reduces to zero the possibilities of escape or evasion to different stimuli or aversive and unexpected situations, and which consequently leads to the appearance of deficits or negative alterations at the behavioral, motivational and emotional levels (Abello et al., 2016). Hopelessness, being the inability to respond to aversive situations or stimuli and, having a convergence with depressive traits, lack of dreams and deconstruction of goals in the subject, may be related to suicide (Siabato et al., 2017). Evidence of this is provided by research such as the one conducted with psychiatric patients where a correlation was found between suicide risk and hopelessness (Montaño et al., 2014). In another research conducted in a military population, hopelessness was found to be one of the most representative risk factors for suicidal behavior, in convergence with depressive states (Abello et al., 2016). For their part, Campo et al. (2019) affirm that people with high levels of hopelessness have a 6 times higher risk of suicidal ideation.

In the Colombian PDPL it was found that there is a significant correlation between suicide risk and

hopelessness. In research conducted in Tunja with a group of convicted inmates, a relationship was found between suicide risk, levels of hopelessness and depression, observing that those inmates with moderate or high levels of hopelessness tend to show greater suicidal risk behavior, while those without suicidal risk show mild hopelessness (Mojica, 2009). Other associated research is that of Medina et al. (2011) where they pointed out as the main result the relationship between suicide risk and depression, which is directly related to hopelessness; and that of Fuentes (2018), where hopelessness was identified as a factor that influences the development of greater risk of violence. At the international level, the panorama is similar; in Australia, it was found that one fifth of the prison population had attempted suicide and one third had experimented suicidal ideations (Larney et al., 2012); and in Wales, it was found that, by relating hopelessness and the probability of suicide, the affective component could constitute a strong predictor of suicidality (Gooding et al., 2015). Thus, the interest of some authors in indicating the prevalence of psychological symptomatology in prison population with and without conviction, where for Spain is even found the comorbidity between personality disorders, abuse or dependence on psychoactive substances, schizophrenia, major depression and anxiety (Botero, 2019; Garcia, 2012).

Mental disorders have been a factor that has been strongly associated with increased suicide rates. In prison in England and Wales, the clinical characteristics of 157 of 172 self-inflicted deaths in inmates were described, reporting that approximately 70% of the participants had at least one psychiatric diagnosis (Humber et.al., 2011). Psychological factors such as defeat and hopelessness are also reported as factors associated with suicidal thoughts and behaviors, especially in populations with psychiatric disorders, where schizophrenia, post-traumatic stress disorder and depression stand out (Bolton, 2007). In the United States, with men and women imprisoned in state correctional centers, it was found that, of the 18.185 inmates, 13.7% have attempted suicide in their lifetime, being 21.4% female sample and 78.6%

people of male gender (Stoliker, 2018). As associated factors, mental health is mentioned as a precipitating factor, being the presence of a psychiatric disorder, the one that represents the highest incidence in the suicide of these people (Stoliker, 2018). Specifically, it is reported that 25.3% of the sample reported having been diagnosed with some disorder, and 6.7% experienced hopelessness (Stoliker, 2018).

Research studies such as the present one is proposed from the legal-penitentiary psychology, making possible an empirical knowledge base of the prison reality in Latin American countries such as Colombia, but in this opportunity, through what is reported by people who are deprived of their personal liberty in a preventive manner. This can be used in various prevention and intramural intervention strategies with a greater framework of coverage, ratifying the importance of developing or sustaining protective measures for those who are not convicted. Therefore, the main objective is to determine the level of suicidal risk and hopelessness of a sample of Colombian inmates who are deprived of their individual liberty in pretrial detention, and the possible relationship between these study variables.

## METHOD

### Design of study

The present research is a quantitative study given that it oriented the characterization of the variables (suicide risk and hopelessness) apart from numerical data and with little subjectivity on the part of the participants and researchers (Hernández et al., 2014). The design is comparative-correlational, and supports an associative, descriptive, and non-experimental strategy (Ato et al., 2013), achieving to establish the variables description, the functional relationship between them, and the comparison of groups according to the age and time that participants had been deprived of their individual liberty at time of the assessment.

### Participants

This study included participants who were PDPL in a Colombian prison (n = 100). All of them reported having entered prison for the first time. 100% of the sample was male, their ages ranged from 18 to 65 years (18 to 39 years: 48%; 40 to 65 years: 52%), and they belonged to low socioeconomic levels (strata 1: 62%; strata 2: 38%); most of the sample had not completed their formal education (69%). All of them were in intramural preventive detention, which means that they were being detained as PDPL and had not yet been found guilty of the crime (0 to 10 months of deprivation of their personal liberty: 51%; 11 to 20 months: 49%). The prison in which the participants were deprived of their liberty at the time of the assessment is an establishment that was built more than 50 years ago with a capacity to hold a total of 720 inmates. It currently has a capacity for 2910 people, which is exceeded by an overcrowding rate of more than 20%.

The sample size was defined according to the standard error method, where a minimum of 100 participants is recommended for studies with a confidence level of 95%, and the participants were selected through non-probabilistic convenience

sampling. People with any disease or disability that prevented them from completing the instruments (psychiatric, physical, neurological, and metabolic diseases) were excluded, as well as those people who were in prison as convicted PDPL. For the present study, the inclusion of persons with disease diagnoses may increase the level of bias and decrease the level of precision of the data, since the main interest is in determining the measurement of attributes in the absence of conditions that serve as confounding variables for their direct impact on the level of suicidal risk and hopelessness.

### Instruments

**Beck Hopelessness Scale (BHS)**, instrument of 20 items, with a true and false response. It allows the assessment of hopelessness or the attitude that the person has based on his/her well-being and expectations about himself/herself and the future (Beck et al., 1974). It seeks to measure hopelessness based on cognitive, motivational, and affective factors. The score allows one to obtain different levels: *normal or asymptomatic* (0 to 3), *mild hopelessness* (4 to 8), *moderate hopelessness* (9 to 14), and *severe hopelessness* (15 to 20). A score of 9 or more is considered a predictor of suicidal behavior (González, 2009). This instrument exhibits adequate psychometric properties for the Latin American population, specifically, for the Peruvian (Aliaga et al., 2006), Argentine (Mikulic et al., 2009) and Colombian populations (González, 2009). The reliability indices of the instrument in Spanish, measured with Cronbach's alpha, have shown some variations:  $\alpha = .78$  in the study by Mikulic et al. (2009);  $\alpha = .80$  in that of Aliaga et al. (2006); and  $\alpha = .83$  in that of González (2009). Concurrent, factorial and differential validity is adequate according to these same studies.

**Plutchik's Suicide Risk Scale**, instrument of 15 items, and that assesses suicide risk in clinical and non-clinical population, through dimensions that show depression feelings, current suicidal ideation and the several self-harm attempts made (Plutchik y Van Praag, 1989). It has a score range from 0 to

15 where 0 would be equivalent to lower risk and 15 to higher risk. This instrument had adequate psychometric properties in its Spanish version (Rubio et al., 1998). The data can be interpreted as follows: *low or minimal risk* (normality = 0-5 pts), *risk of committing suicide* (mild/moderate depressive state = 6-10 pts.) and *high suicide risk* (severe depressive state = 11-15 pts.). This instrument presented adequate psychometric properties, showing a reliability of .90 and a sensitivity of 74% in its Spanish version (Rubio et al., 1998). Likewise, a Cronbach's alpha of the scale of .74 and a confirmatory factor analysis of optimal fit were found, resulting in an adequate instrument to detect suicide risk (Santana & Santoyo, 2018).

## Procedure

Initially, the population sample was searched according to inclusion and exclusion criteria pre-established by researchers. For this, we had the support of National Penitentiary and Prison Institute (INPEC) and its main information system (SISIPEC). Was the sample was selected, authorization was obtained to enter to the prison, following the appropriate security measures, thus providing support for the administration of the test (Beck Hopelessness Scale and Plutchik's Suicide Risk Scale) with each of the participants. At the end of the application, the scoring of the instruments, their statistical analysis, and the final preparation of the research report were carried out.

## Data analysis

Statistical analysis was performed using the integrated programming language environment Rstudio. For statistical analysis purposes, the sample was divided according to the criteria of age (Group 1: 18 to 39 years; Group 2: 40 to 65 years) and time of deprivation of personal liberty (Group 1: 0 to 10 months; Group 2: 11 to 20 months). Initially, and in accordance with the division by age groups and time in prison, we proceeded to the descriptive analysis of the data, establishing measures of central tendency

and dispersion, as well as frequency statistics. Subsequently, a normality test (Shapiro-Wilk) was performed where the results show a free distribution of the data; for this reason, the implementation of non-parametric tests was chosen for the general analysis of the data (association and comparison). For the comparison of the results by groups, we proceeded to analyze the possible heterogeneity of the independent samples by Mann-Whitney U test. Finally, to establish the bidirectional functional relationship between the variables, association analyses were performed using Spearman's correlation coefficient, which provides information on the strength of the association and its direction.

## Ethical considerations

In the present study, compliance with principles such as autonomy, beneficence, non-maleficence, and justice was guaranteed in accordance with ethical criteria for research with human beings of the American Psychological Association (2017), resolution 8430 (Ministry of Health and Social Protection, 1993) and the Universal Declaration of Ethical Principles for Psychologist of the International Union of Psychological Science (IUPsyS, 2008). This research was approved by the ethics and research committee of the Psychology program of the INCCA University of Colombia, who reviewed and evaluated the evaluation protocol with persons deprived of liberty in one of their professional practice scenarios.

Initially, the select participants were informed, discussed, and clarified the procedures to be carried out in the research. It was indicated that in the present research the information collected would be kept confidential and would be used exclusively for the fulfillment of the pre-established research aims. Then, the informed consent form was signed and filled out, and those who decided to participate were informed of their right to know the results at the end of the research.

## RESULTS

### Descriptive data on hopelessness and suicide risk

According to the data obtained, and based on the distribution by age groups, it was found that people aged between 40 and 65 years present a higher level of hopelessness ( $M = 4.98$ ;  $SD = 3.09$ ) compared to people aged between 18 and 39 years ( $M = 3.96$ ;  $SD = 3.26$ ) (Table 1). Regarding the time in prison, a higher

mean score ( $M = 4.73$ ;  $SD = 3.49$ ) of hopelessness is found in people with time of deprivation of their personal liberty between 0 and 10 months, compared to those who exceed this time (Table 1).

In the suicide risk level, the results are similar. A higher mean score was found in people aged 40 and 65 years ( $M = 3.98$ ;  $SD = 2.94$ ) and in people who had been deprived of personal liberty for 0 to 10 months ( $M = 4.14$ ;  $SD = 3.11$ ); this, in comparison with the other age and time in prison groups (Table 1).

Table 1.

*Descriptive analysis of hopelessness and suicide risk.*

Category	Group	Variable	M	D.E.
Age	18 a 39 years	Hopelessness	3.96	3.26
		Suicide risk	3.90	3.04
	40 a 65 years	Hopelessness	4.98	3.09
		Suicide risk	3.98	2.94
Time in prison	0-10 months	Hopelessness	4.73	3.49
		Suicide risk	4.14	3.11
	11-20 months	Hopelessness	4.24	2.87
		Suicide risk	3.73	2.84

**Nota:** M (Arithmetic Mean), S.D (Standard deviation). Source; prepared by the authors.

## Frequency analysis of hopelessness and suicide risk

Specifically, related to the categorizations by hopelessness and suicide risk levels obtained from the instruments administered, it was found that, for the hopelessness variable, most people (65.4%) aged between 18 to 39 report mild to moderate symptomatology. On the other hand, people between 40 and 65 years report a low frequency of non-asymptomatic level (25%). According to the length of time in prison, it was found that most people deprived of their personal liberty for 0 to 10 months (48.9%) present a hopelessness level distributed as follows: mild (47.1%) and moderate (11.8%). A similar situation occurs with people who have been deprived of liberty for more than 10 months. This people who have been deprived of liberty for 11 to 20 months, for the most part, report non-asymptomatic levels (51%).

For the suicide risk, people aged between 18 and 39 years and between 40 and 65 report mostly minimal suicide risk levels; their percentage rates are 72.9% and 75%, respectively. However, the results for both groups show people with moderate and severe levels for this variable.

The results are similar according to the length of time in prison. For people deprived of liberty for between 0 and 10 months, the level in which most participants are located is the minimum (70.6%).

For people deprived of liberty for more than 10 months, this same stage is the one in which most people report the highest frequency (minimum: 77.6%). Nevertheless, and as was the case with the distribution by age, there are people with moderate and severe levels for both groups in the distribution by time in prison.

At the moment of data collection, a total of 6 people (6%) in the sample reported having previously attempted suicide.

## Comparative analysis of hopelessness and suicide risk between groups by age and time in prison

For the development of the comparative analysis, a normality test (Shapiro-Wilk) was performed to confirm the state of the distribution of data, and according to the results, a free distribution was obtained ( $p < .05$ ), which led to the comparison of the independent samples through non-parametric methods.

In the comparative analysis by age groups and by groups distributed according to time of prison, no statistically significant differences were found ( $p < .05$ ) (Table 2).

Table 2.

*Comparative analysis of hopelessness and suicide risk between groups by age and time in prison.*

Category	Variable	U M-W (significance)
Age	Hopelessness	.05
	Suicide risk	.83
Time in prison	Hopelessness	.59
	Suicide risk	.54

**Nota:** U M-W (U Mann-Whitney test). Source: prepared by the authors



## Relationship between hopelessness and suicide risk in general population sample

Assuming free distribution of data, confirmed through the normality test, Spearman's correlation coefficient was run to determine the possible association between the variables of hopelessness and suicide risk. As a result, a moderate, positive, and significant correlation was obtained ( $Rho = .59$ ;  $p = .04$ ).

## DISCUSSION AND CONCLUSIONS

The aim of this research was to describe the relationship between hopelessness and suicide risk in inmates in intramural preventive detention. In this regard, it was established as a specific aim to describe the current manifestation of these two variables among the different age groups (18 to 39 years and 40 to 65 years) of the population approached and according to the time in which the participants have been deprived of personal liberty in an intramural environment (0 to 10 months and 11 to 20 months).

A higher level of hopelessness was initially found in PDPL aged 40 to 65 years compared to those aged 18 to 39 years. Consistent with this, Stoliker et al. (2020) found that hopelessness is more prevalent in inmates older than 50 years, followed by inmates between the ages of 31 and 49 years; those who showed lower hopelessness scores were those between 16 and 30 and 30 years of age. The previous research, like the present one, reports a higher level of hopelessness in older adult inmates. In the same age groups (40 to 65 years) a higher level of suicide risk was also found, and in this regard, a related data, Mamchenko et al. (2018) found in their study with detained persons who are suspects and accused of committing crimes, that an elevated level of suicide risk is positively related to the age of the population; that is, to higher age, higher score on suicide risk.

Regarding the time in prison, a higher level of hopelessness was found in people who had

been deprived of personal liberty between 0 and 10 months than in those who had been deprived between 11 and 20 months, which could indicate that the level of hopelessness could be higher in the first periods of internment. Studies such as that of Slade et al. (2012), where 181 recently detained inmates (3 months) were described, confirms that hopelessness can be identified as higher at the beginning of the detention. However, it should be noted that this same investigation identifies a decrease in the level of this variable as time progresses, not necessarily, exceeding 10 months of hospitalization; it is possible to see its decrease between 2 and 6 months of deprivation of liberty. Furthermore, Mamchenko et al. (2018) point out in their research with inmates in pretrial detention, that the changes in hopelessness during the first months do not vary significantly; that is, hopelessness could decrease, without the change being substantial, and it could also begin to present slight increases after 6 months of stay in the detention center.

Also, in people who had been deprived of their personal liberty for 0 to 10 months, it is found that the suicide risk level is higher, and this coincides with the findings of Bukten & Stavseth (2021), who affirm that the suicide risk is more significant from the first day of incarceration and tends to decrease in the first 2 to 6 months. According to these same authors, as time in prison progresses, the level of risk tends to decrease, with lower levels occurring in those who have been deprived of their liberty for longer periods of time. Favril et al. (2017), for their part, affirm that, in the periods prior to 12 months of custody, inmates have a higher probability of developing suicidal ideation.

In the results, levels of hopelessness were found from mild to moderate in both age groups (18 to 39 and 40 to 65 years), prevailing the mild level, which leads to point out the low presence of this variable in the population sample detained preventively in Bogotá, Colombia. Comparatively with other investigations, it stands out that in studies such as Pratt and Foster, (2020), which had a convicted and non-convicted sample, the levels are contrary to those found in the present investigation. The levels presented

there, managed to indicate elevations that allow us to consider the magnitude of the problem, so much so, that their resulting scores were predictors of the suicidal risk presented for the evaluated population.

The research carried out by Gu & Cheng (2020) is mostly close to the results of the present study, indicating the presence of moderate levels of hopelessness in their population sample, associated with the belief in a just world, negative life events and non-suicidal self-harm. This research suggests the presence of hopelessness in different age ranges, but mostly in older adults, indicating as possible factors associated with affective processes, relationships and social support.

For the level of suicide risk, the results of the present research indicate low or minimum levels for the sample detained preventively. This finding is striking when considering that it is unusual and contrary to what has been reported in other researches with populations deprived of liberty. In this regard, Favril et al. (2021) report moderate and severe levels for the different age ranges, as happened with the minority of the participants in this study. These same authors report suicidal ideation and attempt as frequent in the participants, and associate it with the registered psychopathological and psychiatric morbidity. Stoliker et al. (2020) for their part, also point to cross-sectional data from a mental health survey that is contrary to that of this study, demonstrating the existence of a high suicidal risk for young and older adults.

Comparatively, no statistically significant differences were found in the level of hopelessness and suicidal risk in the groups by age, nor in the groups by time in prison, showing homogeneous levels for the sample of participants. The slight differences according to age and the time spent in detention direct attention to other study variables to recognize possible differences between population groups also deprived of their liberty. In this regard, Favril et al. (2020) are consistent in pointing out that variations in the level of hopelessness and suicidal risk can be better evidenced in comparisons with convicted persons, with people with different types of crimes committed,

with people with specific psychiatric diagnoses, and with people who consume psychoactive substances. For this study, the aforementioned variables were not taken into account, since being preventively detained, there is no conviction, and there is no crime committed; in addition, only people who did not have psychological and psychiatric diagnoses at the time of the evaluation participated.

At the correlational level, a moderate, positive (as one variable increases, the other increases) and significant relationship was found between hopelessness and suicide risk in the total sample, which is congruent with the existing literature on these two variables. However, to interpret this relationship, it is important to highlight that the scores were low for both variables, which could mean that the lower the hopelessness, the lower the suicidal risk. The sample evaluated, which was in preventive prevention, does not report clinically significant levels of hopelessness, nor a level of risk that is an alarm indicator, but as the data cannot be generalized, it is recommended to keep under observation and evaluation the behavior not only of convicted persons, but also of those who still have the presumption of innocence.

According to the correlational results obtained, it can be noted that other studies also report a significant relationship, but from the existence of higher levels of the evaluated attributes; an example of this is the research of Pratt and Foster, (2020) with convicted and pretrial population, where they found moderate levels of hopelessness as predictors of suicidal ideation. Also for his part Stoliker (2018) described the correlation between hopelessness and suicide attempt as moderate and positive; Gu and Cheng (2020) showed the positive relationship between hopelessness and non-suicidal self-injury; and finally, Mamchenko et al. (2018) identified the positive relationship between hopelessness and suicide risk.

All of the above could indicate that for the population deprived of liberty in prisons, hopelessness as a cognitive scheme could be a risk factor for suicidal behavior. But in this study, hopelessness, when represented at low levels for the preventive

population, does not constitute a factor that increases suicidal risk, but on the contrary, decreases it. This could be due to associated protective factors that were not considered as variables for the present study, and which are considered to open up new investigations with the preventively detained population; examples of these are: the personal characteristics of the participants, their stress coping mechanisms, their forms of bonding and interpersonal interaction, their motivations and their life projection.

Given the lack of publications developed in the country and internationally, in which these variables are evaluated in the pretrial detainee population, this study is a starting point for the generation of knowledge associated with populations that are not addressed at the risk of violating rights such as the presumption of innocence. Here the results point to positive aspects, which when compared with the convicted population, show the possibility of maintaining the penitentiary accompaniment that is being provided to the accused population, which could be established as a protective factor in the face of the different circumstances that the prisonization process brings with it.

Finally, and in accordance with the aim of this research, it is important to point out that the size of the sample and the statistical analyses developed should be taken into account when analyzing the conclusions, since they may partially limit their accuracy. The sample in particular does not represent the population in general, but only a part of it.

#### **CONFLICTS OF INTEREST**

We have no known conflict of interest to disclose.

## REFERENCIAS

Abello, L., García, M., García, R., Márquez, J., Niebles, C., Pérez, P. (2016). Perfil cognitivo y prevalencia de depresión, desesperanza y riesgo suicida en jóvenes vinculados al primer nivel de formación en una escuela militar colombiana. *Psicología desde el Caribe*, 33(3), 299-311. <https://doi.org/10.14482/psdc.33.3.9493>

Alcántara-Jiménez, M., Torres-Parra, I., Guillén-Riquelme, A. y Quevedo-Blasco, R. (2023). Los factores psicosociales en el suicidio de presos en prisiones europeas: una revisión sistemática y metaanálisis. *Anuario de Psicología Jurídica*, 33, 101-114. <https://doi.org/10.5093/apj2022a13>

Aliaga, J., Rodríguez, L., Ponce, C., Frisancho, A., Enríquez, J. (2006). Escala de Desesperanza de Beck (BHS): Adaptación y características psicométricas. *Revista de Investigación en Psicología*. 9(1), 69-79. <https://doi.org/10.15381/rinvp.v9i1.4029>

American Psychological Association. (2017). Ethical principles of psychologists and code of conduct. <https://www.apa.org/ethics/code/ethics-code-2017.pdf>

Anbesaw, T., Tsegaw, M., & Endra, A. (2022). Suicidal behavior and associated factors among prisoners at Dessie town correctional institution, Dessie, Ethiopia. *BMC Psychiatry*, 22, 656. <https://doi.org/10.1186/s12888-022-04306-2>.

Ato, M., Lopez, J., & Benavente, A. (2013). Un sistema de clasificación de los diseños de investigación en psicología. *Anales de Psicología*, 29(3), 1038-1059. <https://doi.org/10.6018/analesps.29.3.178511>

Beck, A.T., Weissman, A., Lester, D., & Trexler, L. (1974). "The measurement of pessimism: The Helplessness Scale". *Journal of Consulting and Clinical Psychology*, 42, 861-865. <https://doi.org/10.1037/h0037562>

Bolton, C., Gooding, P., Kapur, N., Barrowclough, C., & Tarrier, N. (2007). Developing psychological perspectives of suicidal behaviour and risk in people with a diagnosis of schizophrenia: We know they kill themselves but do we understand why? *Clinical Psychology Review*, 27(4), 511-536. <https://doi.org/10.1016/j.cpr.2006.12.001>

Botero-Ceballos L. E, Arboleda-Amortegui G, Gómez-Fernández A, García-Cardona M, Agudelo-Suárez A. (2019). Depresión en personas recluidas en centros penitenciarios: revisión narrativa. *Revista de la Facultad de Ciencias de la Salud de la Universidad del Cauca*, 21 (1):23-33.

Bukten, A., & Stavseth, M. R. (2021). Suicide in prison and after release: a 17-year national cohort study. *European journal of epidemiology*, 36(10), 1075-1083. <https://doi.org/10.1007/s10654-021-00782-0>

Campo Llinas, L. V., Palma Altamar, A. M., & Paternina Castro, J. K. (2019). Descripción de ideación suicida y desesperanza de vida en jóvenes universitarios. Universidad Cooperativa de Colombia. <https://repository.ucc.edu.co/server/api/core/bitstreams/3fa0c268-c6e8-486c-b7d7-8eb96655eccb/content>

Cook, T. B. (2013). Recent criminal offending and suicide attempts: a national sample. *Soc. Psychiatry Psychiatr Epidemiol*, 48(5), 767-774. <https://doi.org/10.1007/s00127-012-0567-9>

Echeburúa, E. (2015). Las múltiples caras del suicidio en la clínica psicológica. *Terapia psicológica*, 33 (2), 117-126. <http://dx.doi.org/10.4067/S0718-48082015000200006>

Favril, L., Vander Laenen, F., Vandeviver, C., & Audenaert, K. (2017). Suicidal ideation while incarcerated: Prevalence and correlates in a large sample of male prisoners in Flanders, Belgium. *International Journal of Law and Psychiatry*, 55, 19-28. <https://doi.org/10.1016/j.ijlp.2017.10.005>.

Fazel S., Ramesh T., & Hawton K. (2017). Suicide in prisons: an international study of prevalence and contributory factors. *The Lancet Psychiatry*, 4(12), 946-952. doi: 10.1016/S2215-0366(17)30430-3.

Fuentes, V.J. (2018). Desesperanza como factor de riesgo ante la ideación suicida en internos de establecimientos carcelarios y penitenciarias de alta y mediana seguridad del área metropolitana de Bucaramanga, provincia guanentina y comunera. <http://hdl.handle.net/20.500.12749/309>

García-Guerrero, J., & Marco, A. (2012). El hacinamiento en las prisiones y su impacto en la salud. *Revista Española de Sanidad Penitenciaria*, 14 (3), 106-113. [http://scielo.isciii.es/scielo.php?script=sci\\_arttext&pid=S1575-06202012000300006&lng=en&tlng=en](http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S1575-06202012000300006&lng=en&tlng=en).

Garcia, J., Garcia, H., Gonzalez, M., (2017). Un enfoque contextual - fenomenologico sobre el suicidio. *Revista de la Asociación Española de Neuropsiquiatría*, 38(134), pp. 381-400. <https://dx.doi.org/10.4321/s0211-57352018000200003>

González, C. (2009). Propiedades psicométricas de la escala de desesperanza de Beck en una muestra bogotana. *Psychologia. Avances de la disciplina*, 3(2), 17-30. <://www.redalyc.org/articulo.oa?id=297225531001>

Gooding, P., Tarrier, N., Dunn, G., Shaw, J., Awenat, Y., Ulph, F., & Pratt, D. (2015). The moderating effect of coping and self-esteem on the relationship between defeat, entrapment and suicidality in a sample of prisoners at high risk of suicide. *European Psychiatry*, 30(8), 988-994. doi: 10.1016/j.eurpsy.2015.09.002.

Gu, H., Lu, Y., & Cheng, Y. (2020). Negative life events and nonsuicidal self-injury in prisoners: The mediating role of hopelessness and moderating role of belief in a just world. *Journal of clinical psychology*, 77(1), 145-155. <https://doi.org/10.1002/jclp.23015>

Hernandez Sampieri, R., Fernandez-Collado, C y Baptista-Lucio, P. (2014). Metodología de la investigación. 6 edición. Mcgraw Hill Education.

Humber, N., Hayes, A., Senior, J., Fahy, T., & Shaw, J. (2011). Identifying, monitoring and managing prisoners at risk of self-harm/suicide in England and Wales. *The Journal of Forensic Psychiatry & Psychology*, 22(1), 22-51. doi:10.1080/14789949.2010.518245

Illana, I & Thomas, H. (2021). Propuesta de un Programa de prevención del suicidio en la cárcel. *Behavior & Law Journal*, 7 (1), 23 - 34. <https://www.behaviorandlawjournal.com/BLJ/article/view/85/97>

Jiménez, M. P., & Linero, L. (2015). Riesgo suicida, desesperanza y factores asociados en personal privado de la libertad en un centro de reclusión militar en Colombia. *RFS Revista Facultad de Salud*, 7(1), 61-68. <https://doi.org/10.25054/rfs.v7i1.182>

Larney, S., Topp, L., Indig, D., O'Driscoll, C., & Greenberg, D. (2012). A cross-sectional survey of prevalence and correlates of suicidal ideation and suicide attempts among prisoners in New South Wales, Australia. *BioMedCentral Public Health*, 12(14). <https://doi.org/10.1186/1471-2458-12-14>

Larrotta-Castillo, R., Luzardo-Briceño, M., Vargas-Cifuentes, S., & Rangel-Noriega, K. (2014). Características del comportamiento suicida en cárceles de Colombia. *Revista Criminalidad*, 56(1), 83-95. <http://www.scielo.org.co/pdf/crim/v56n1/v56n1a06.pdf>

Lombeyda A, Sontiago F. (2015). Factores de riesgo para depresión y ansiedad de internos privados de su libertad del centro de rehabilitación social Guaranda [Tesis de grado]. Universidad San Francisco de Quito.

Manchenko, A. M., Tsvetkova, N. A., Krotova, D. N., & Rydakova, A. I. (2018). Suicide risk among suspects and defendants in detention center. *European Proceedings of Social and Behavioural Sciences*, 50(1), 1226-2231. <https://doi.org/10.15405/epsbs.2018.12.150>

Marzano, L., Hawton, K., Rivlin, A., Smith, E. N., Piper, M., & Fazel, S. (2016). Prevention of suicidal behavior in prisons. *Crisis*, 37(5), 323-334. <https://doi.org/10.1027/0227-5910/a000394>.

Medina Pérez, O., Cardona Duque, D. V., Arcila, López, S. C. (2011). Riesgo suicida y depresión en un grupo de internos de una cárcel del Quindío (Colombia). *Investigaciones Andina*, 13(23), 268-280. [http://www.scielo.org.co/scielo.php?script=sci\\_arttext&pid=S0124-81462011000200004](http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S0124-81462011000200004)

Mikulic, I. M., Cassullo, G.L., Crespi, M. C., & Maraconi, A. (2009). Escala de desesperanza BHS (A. Beck, 1974): Estudio de las propiedades psicométricas y baremación de la adaptación argentina. *Anuario de Investigaciones*, XVI, 365-373. <https://www.redalyc.org/pdf/3691/369139945034>

Ministry of Health and Social Protection. (2018). Boletín de salud mental, conducta suicida. Subdirección de enfermedades no transmisibles. Boletín 2. [Internet]. [https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/VS/PP/ENT/boletin conducta-suicida.pdf](https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/VS/PP/ENT/boletin%20conducta-suicida.pdf)

Ministry of Health and Social Protection. Resolución 8430. Establecen las normas científicas, técnicas y administrativas para la investigación en salud. (4 octubre de 1993). <https://up.pe.libguides.com/c.php?g=1043492&p=7615241>

Ministry of Health and Social Protection. Notificación de la conducta suicida en Bogotá D.C. [https://saludata.saludcapital.gov.co/osb/index.php/datos-de-salud/salud-mental/suicidio/#\\_ftn4](https://saludata.saludcapital.gov.co/osb/index.php/datos-de-salud/salud-mental/suicidio/#_ftn4)

Mojica, C. A., Sáenz, D. A., & Rey-Anacona, C. A. (2009). Riesgo suicida, desesperanza y depresión en internos de un establecimiento carcelario colombiano. *Revista Colombiana Psiquiátrica*, 38(4), 681-692. <http://www.scielo.org.co/pdf/rcp/v38n4/v38n4a09.pdf>.

Montaño, S. H., Valencia Zableh, A., Caamaño León, B., & Ceballos Ospino, G. (2014). Riesgo suicida y desesperanza en pacientes psiquiátricos hospitalizados. *Pensando Psicología*, 10(17), 43-51. <https://doi.org/10.16925/pe.v10i17.783>

National Administrative Department of Statistics - DANE. (2021). Salud Mental en Colombia: un análisis de los efectos de la pandemia. <https://www.dane.gov.co/files/investigaciones/notas-estadisticas/ago-2021-nota-estadistica-salud-mental-en-colombia-analisis-efectos-pandemia.pdf>

National Institute of Health. (2022). Protocolo de Vigilancia en Salud Pública de Intento de Suicidio. versión 1. Colombia. [https://www.ins.gov.co/buscador eventos/SitePages/Evento.aspx?Event=49](https://www.ins.gov.co/buscador%20eventos/SitePages/Evento.aspx?Event=49)

National Institute of Legal Medicine and Forensic Sciences (2022). Boletín estadístico mensual. Centro de Referencia Nacional sobre Violencia - CRNV. [https://www.medicinalegal.gov.co/documents/20143/742818/Boletin\\_diciembre\\_2022.pdf](https://www.medicinalegal.gov.co/documents/20143/742818/Boletin_diciembre_2022.pdf)

National Penitentiary and Prison Institute - INPEC. (2023). Tableros estadísticos. Intramural. Colombia. <https://www.inpec.gov.co/estadisticas-/tableros-estadisticos>

Plutchik, R., & Van Praag, H. (1989). The measurement of suicidality, aggressivity and impulsivity. *Progress in Neuropsychopharmacology and Biological Psychiatry*, 13(1), 23-34. doi: 10.1016/0278-5846(89)90107-3.

Pratt, D., & Foster, E. (2020). Feeling hopeful: can hope and social support protect prisoners from suicide ideation? *The Journal of Forensic Psychiatry & Psychology*, 31(2), 311-330. <https://www.tandfonline.com/doi/abs/10.1080/14789949.2020.1732445>

Rendón-Quintero, E., & Rodríguez-Gómez, R. (2016). Vivencias y experiencias de individuos con ideación e intento suicida. *Revista Colombiana de Psiquiatría*, 45(2), 92-100. <https://doi.org/10.1016/j.rcp.2015.08.003>.

Rivlin, A., Hawton, K., Marzano, L., & Fazel, S. (2013). Psychosocial Characteristics and Social Networks of Suicidal Prisoners: Towards a Model of Suicidal Behaviour in Detention. *PLoS One*, 8(7): e68944. <https://doi.org/10.1371/journal.pone.0068944>.

Romero, H., Chulian, A., & Marquez, R. (2018). Comportamiento suicida, factores que lo desencadenan. IV Congreso virtual internacional de enfermería en salud mental. <https://psiquiatria.com/congresos/pdf/3-3-2018-15-comu10.pdf>

Rubio, G., Montero, I., Jáuregui, J., Villanueva, R., Casado, M. A., Marín, J. J., Santo-Domingo, J. (1998). Validación de la escala de riesgo suicida de Plutchik en población española. *Archivos de Neurobiología*, 61(2), 143-152.

Santana-Campas, M. A., & Santoyo Telles, F. (2018). Propiedades psicométricas de la escala riesgo suicida de Plutchik en una muestra de jóvenes mexicanos privados de la libertad. *Avances En Psicología*, 26(1), 57-64. <https://doi.org/10.33539/avpsicol.2018.v26n2.1127>

Serrano Jaimes, L. Y., Villamizar Flórez, S. A., & Roa Uribe, A. P. (2020). Características Asociadas al Riesgo Suicida en Personas Privadas de la Libertad. Universidad Cooperativa de Colombia. <https://repository.ucc.edu.co/server/api/core/bitstreams/18e7a1d1-710d-4369-a838-72136e741573/content>

Siabato Macías, E. F., Forero Mendoza, I. X., & Salamanca Camargo, Y. (2017). Asociación entre depresión e ideación suicida en un grupo de adolescentes colombianos. *Pensamiento Psicológico*, 15(1), 51-61. doi: 10.11144/Javerianacali.PPSI15-1.ADIS

Slade, K., Edelman, R., Worrall, M., & Bray, D. (2012). Applying the Cry of Pain Model as a predictor of deliberate self-harm in an early-stage adult male prison population. *Legal and Criminological Psychology*, 19(1), 131-146. <https://doi.org/10.1111/j.2044-8333.2012.02065.x>

Stoliker, B. E. (2018). Attempted Suicide: A Multilevel Examination of Inmate Characteristics and Prison Context. *Criminal Justice and Behavior*, 45(5), 589-611. doi:10.1177/0093854818754609

Stoliker, B. E., Verdun-Jones, S. N., & Vaughan, A. D. (2020). The relationship between age and suicidal thoughts and attempted suicide among prisoners. *Health & Justice*, 8(14), 1-19. <https://doi.org/10.1186/s40352-020-00117-3>

Suárez-Colorado, Y., Palacio-Sañudo, J., Caballero-Domínguez, C. C., y Pineda-Roa, C. A. (2019). Adaptación, validez de construcción y confiabilidad de la escala de riesgo suicida Plutchik en adolescentes colombianos. *Revista Latinoamericana de Psicología*, 51(3), 145-152. <https://doi.org/10.14349/rlp.2019.v51.n3.1>

Universal Declaration of Ethical Principles for Psychologists of the International Union of Psychological Science (IUPsyS). (26 julio de 2008). <http://blog.pucp.edu.pe/blog/wp-content/uploads/sites/39/2011/09/Declaracion-Universal-de-principios-Eticos.pdf>

World Prison Brief e Institute for Criminal & Justice Policy Research. (2021). World Prison Population List. [https://www.prisonstudies.org/sites/default/files/resources/downloads/world\\_prison\\_population\\_list\\_13th\\_edition.pdf](https://www.prisonstudies.org/sites/default/files/resources/downloads/world_prison_population_list_13th_edition.pdf)

World Health Organization – WHO (s.f). Suicidio. Organización Mundial de la Salud. <https://www.who.int/es/news-room/fact-sheets/detail/suicide>

World Health Organization - WHO. (2000). Prevención del suicidio un instrumento para médicos generalistas. Departamento de salud mental y taxonomía. [https://apps.who.int/iris/bitstream/handle/10665/75428/WHO\\_MNH\\_MBD\\_00.1\\_spa.pdf?sequence=1&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/75428/WHO_MNH_MBD_00.1_spa.pdf?sequence=1&isAllowed=y)

World Health Organization - WHO. (2007). Prevención del suicidio en cárceles y prisiones. [https://apps.who.int/iris/bitstream/handle/10665/75425/WHO\\_MNH\\_MBD\\_00.7\\_spa.pdf?sequence=1&isAllowed=y](https://apps.who.int/iris/bitstream/handle/10665/75425/WHO_MNH_MBD_00.7_spa.pdf?sequence=1&isAllowed=y)

World Health Organization - WHO. (2021). Prevención del suicidio. <https://www.paho.org/es/temas/prevencion-suicidio>



World Health Organization - WHO. (2021). Una de cada 100 muertes es por suicidio. <https://www.who.int/es/news/item/17-06-2021-one-in-100-deaths-is-by-suicide>.