

# HIV and Suicide Attempt in the Municipality of Ibagué, Colombia, During the Years 2020-2021

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## Abstract:

The present study analyzes the relationship between suicide attempt and HIV diagnosis in the municipality of Ibagué, Colombia during the years 2020 - 2021. The study has an observational cut (data obtained from the notification forms of the Institute of Public Health Surveillance of Colombia), transversal, comparative and relationship between two events. It is observed that during the year 2020 there were 1106 suicide attempts and 361 HIV diagnoses; for the year 2021 a frequency of 933 suicide attempts, and 335 HIV diagnoses. A sociodemographic characterization of the analyzed populations is also presented.

**Results:** In 2020 with a total of N: 1106 (54.23%), while for the year 2021 N: 929 (45.57%), of which 4 (0.20%) are living with AIDS. Now, in the statistical analysis it is observed:  $\chi^2 = 2383.83675$ ,  $P = 0$ ;  $r = -1$ ;  $r^2 = 1$ ; ODS RATIO VALUE = 0.00165975.

**Conclusions:** There does not seem to be a strong relationship between the risk of committing suicide and having HIV; It is observed that the risk of suicide attempt in the city of Ibagué is 0.0001%; With the value of  $\chi^2$ , the Null Hypothesis is rejected; With the value of P it is determined that the relationship between the variables is null.

**Key words:** mental health; human immunodeficiency virus; performance; suicidal behavior; Sivigila

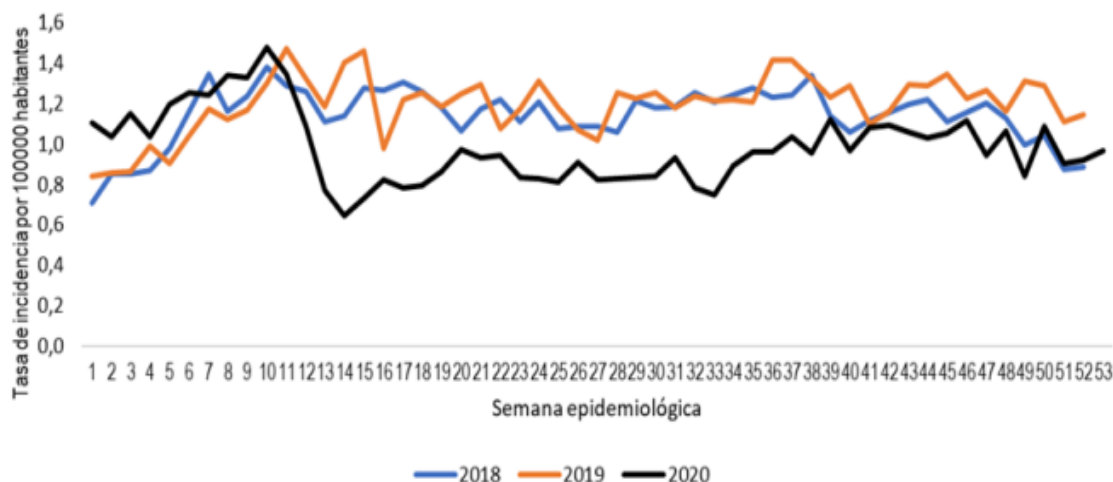
## Introduction

This is a study that seeks to identify the occurrence of suicidal attempt behavior in patients diagnosed with Human Immunodeficiency Virus - HIV in the municipality of Ibagué, Colombia, during the years 2020 - 2021.

Currently, these two variables—suicide attempt and HIV diagnosis—are of particular interest to the Colombian Public Health Surveillance System

(sivigila). Self-harm behavior has been measured since 2016, and "since then, a gradual increase in the national incidence rate has been observed" (sivigila; 2020). Figure 1.

Behavior of the suicide attempt incidence rate by epidemiological week, Colombia, 2018 to 2020



Note: In 2020, 26,202 cases of attempted suicide were reported to Sivigila. The suicide attempt rate per 100,000 inhabitants during 2020 showed a decrease compared to 2018 and 2019. In recent years, an upward trend has been observed, with a higher incidence in women. The rate per 100,000 in 2020 began an upward trend at the beginning of the year, the same trend seen in 2018 and 2019. During week 13, there is a decrease. However, during the three years mentioned, peaks of increase and decrease can be seen. Taken from *the National Institute of Health, Colombia. Suicide Attempt Event Report 2020*. Available at: [https://www.ins.gov.co/buscador-eventos/Informesdeevento/INTENTO%20DE%20SUCIDIO\\_2020.pdf](https://www.ins.gov.co/buscador-eventos/Informesdeevento/INTENTO%20DE%20SUCIDIO_2020.pdf)

According to statistical data presented by Sivigila (2020), within the 37 departments that make up Colombian territory, 43% had rates higher than the national rate, that is, 52.0 per 100,000 inhabitants. Among the highest rates is the department of Tolima. On the other hand, national HIV diagnosis monitoring has seen a 14.6% increase compared to 2019-2020. The High-Cost Accounts (CAC) report highlights a growing trend. In 2019, Tolima had a rate of 223 people living with HIV, while in 2020, the rate was 241. Now, for suicidal behavior to occur, the presence of different risk factors is estimated, such as genetic-biological factors, social-demographic factors, family and childhood characteristics, and personality traits and cognitive styles (R, 2019), with HIV being a risk factor for the occurrence of self-harm behavior (Palacios; Rueda; Valderrama 2006).

### Justification

The relationship between HIV and suicide carries culturally constructed **social stigmas** that require a counterintuitive approach based on the data available in the health sector. This situation constitutes a process in which society categorizes people based on traits that are rejected or undervalued and that have been established as negative categories. These categories are constituted as defects, flaws, or disadvantages that are inconsistent with the stereotypes of the different population and age groups prevalent in HIV. The stigmas associated with HIV and suicide reveal the negative side of a person's perspective on normality (defined by the dominant majority group in society). In this sense, it is pertinent to clarify that discrimination is the action through which certain attributes (genotypic and social) of people are devalued, directly or indirectly justifying the exercise of various types of violence against those who possess them. This is complemented by the understanding that discrimination has a genealogy in each society, as well as particular discursive forms and sociohistorical behaviors that belong to its past and are transmitted from generation to generation. (Margulis and Urresti, 1998, p. 292; Martín-Pérez, 2021). In addition to the physical and emotional dependence that increases when both physical and psychological characteristics require greater levels of care, it generates responses that often express a type of

discrimination: abandonment and self-neglect, which results in suicidal thoughts or behaviors. One phase of this process would be the acquisition of beliefs about what it means to be a person with HIV in the society in which they live, and a second phase would be learning the consequences of living with HIV, including suicidal behavior. The counterintuitive approach based on epidemiological data allows us to take into account the relationships of the HIV positive person with both the informal and formal communities to which they belong, which are crucial. Stigmatization, in this case related to HIV and suicide, allows us to identify common life situations that lead to a joint classification, which in turn can organize assumptions about human nature around them: with the intersectionality of ethnicity, age group, socioeconomic status, and gender, which complements the complexity reduction achieved by HIV data and its correlations and possible causalities with suicide. Based on the above, the question arises: is there a relationship between the increase in HIV diagnoses and the increase in suicidal behavior in the municipality of Ibagué, Tolima, during the years 2020-2021? It should be noted that in Colombia and Tolima, there are no studies or analyses of this type that seek to relate two variables. Similarly, the notification forms for both events do not address these variables; the suicide attempt notification form explores chronic illness, while for the HIV notification form, the clinical information does not address psychological history or the current course of suicidal ideation.

### Objective System

#### A. General Objective

To evaluate the relationship between suicidal behavior and attempted suicide in HIV patients in the municipality of Ibagué Tolima during the years 2020-2021.

#### B. Specific Objective

##### A. Profile sociodemographic variables of people diagnosed with HIV.

## B. To analyze the sociodemographic variables of people with suicide attempts in the municipality of Ibagué Tolima during the years 2020-2021.

### 1. Theoretical Conceptual Framework

The process of social identity construction, which emerges in situations of social interaction, has, in HIV, a source of stigmatization against which society establishes the means to categorize people. The social environment establishes categories of people who can be found within it. Social exchange then makes it likely that when interacting with a stranger, our first appearances allow us to predict which category they fall into and what their attributes are—that is, their social identity. To understand the bio-psycho-social impact of HIV/AIDS on the deterioration of social identity, it is necessary to understand the origins of stigma. Martin-Pérez (2021) indicates that it is produced by primary reactions such as fear of the unknown, contagion/transmission, and the constant search for transmission of the virus. Similarly, the same author relates stigma to the lack of or erroneous information about AIDS, HIV, and the discriminatory relationship with other previously stigmatized groups such as the LGBTI+ community, sex workers, and drug users. On the other hand, Parker et al. (2012) propose four categories of stigma that are immersed in society: sexuality, gender, race, and social class; thus, people with HIV are associated with already stigmatized groups, which increases the individual's vulnerability. Thus, stigma can be considered a social and multidimensional phenomenon that affects people with HIV not only in their physical health but also their mental health. In this area, manifestations such as loss of self-esteem, poor self-concept, feelings of vulnerability, loss of control over future events, loss of security or self-confidence, feelings of worthlessness and helplessness, loss of social, family and marital role, deterioration of social, family and partner relationships, difficulties in carrying out work or occupational activities, difficulties in carrying out leisure and recreational activities, financial worries, changes in life perspective, guilt, irritability, depressive symptoms, and anxiety and/or stress are found (Palacios; Rueda; Valderrama 2006). Furthermore, one of the turning points for suicidal ideation and behavior is associated with personal history, which accompanies and sustains the amplification of stereotypes. In the class on stigma and discrimination taught in the Master's Degree in Human Immunodeficiency at the Rey Juan Carlos University of Spain by Professor Martin-Pérez (2021), he relates studies in which People with HIV have felt excluded or discriminated against in the following way: Myanmar 11% of People with HIV have been excluded from family events; in China 79% of people expressed fear of being the center of gossip; in the United Kingdom 22% reported physical aggression, on the other hand, in Ecuador 12% reported that they were expelled from educational institutions due to their HIV status Palacios et al (2006) like Lopera (2010) conclude that in Colombia more quantitative research is needed around discrimination and stigma in People with HIV. Ramos-Jaraba in her study with transgender women (2021) shows how 15.8% of People with HIV avoid health services, and 45% felt discriminated against. This could be related, according to the author, to the country's heteronormative discourse, which could have other repercussions such as reduced access to education or stable work. Something striking in these investigations is the doctor-patient relationship, since, in their results, it is observed that People with HIV have felt mistreatment and discrimination by health professionals at some point. Tamayo-Zuluaga B. et al. (2015) concluded that there is greater stigma towards HIV patients in the first cycles of training. Similarly, in an article from Web Infobae they show

that, in a study carried out in Colombia during 2019 by the Ministry of Health, it can be seen that in Colombia some HIV-positive people avoid informing their family and coworkers of their situation. Cabrera (2022) mentions that in a study carried out in the main cities of Colombia Bogotá, Cali, Medellín, Bucaramanga, Pereira, Dosquebradas and Cartagena, situations of discrimination such as harassment, threats and aggression were observed, with a greater impact in the education, health and work sectors, places of everyday life, which could or are supposed to put people with HIV at a disadvantage in their social relationships. A topic of interest in this study focuses on how people with HIV interact in their social environment. As is well known, HIV patients experience physical and psychological vulnerability derived from social stigma, raising the question: How can these interactions be understood? From a micro-interactionist sociology perspective, the units of analysis refer to structured situations and casual aggregations, which have the affective dimension of the process as their central axis (Rizo, 2015). These situations are mediated by physical co-presence or face-to-face encounters (López and Reyes, 2010, p. 115). That is, in everyday life, people move within a limited area of study known as the "interaction subsystem." This subsystem is complemented by each of the subsystems of the social system, which are mediated by intersubjectivity and communication (Belvedere, 2012, p. 14). These two aspects—intersubjectivity and communication—are vitally important, given that they intervene in the interpretation of stigmas. That is, when a stigma is internalized, it leads to self-stigmatization, when the subject appropriates social attitudes. On the other hand, there is perceived stigma, when a person with HIV internalizes the stigma and anticipates discrimination, and confirmed stigma, which refers to real experiences of discrimination (Martin-Pérez, 2021). Interactionism focuses on face-to-face interaction, as this is the setting where we develop the affective component that constructs us as social individuals (Goffman, 1959; Herrera and Soriano, 2004; Rizo, 2015). In this way, social interaction is a performance, that is, it is an interpretation; the social actor is a *performer*, because they not only act around a role, but they are also interpreting it. Performance has emotional aspects of their own and of others, this being the basis of our social construction and daily interactions. This actor plays the role they are supposed to play, doing things to be observed by others. On the other hand, it defines that the interaction will exercise norms, bringing out differences derived from: status, sex, nationality and skin color of the interactant. In this sense, the effects of the performance place all social actors in a situation of *performance*. The final *performance* would be suicidal ideation and behavior as symptoms that appear relatively frequently among patients with HIV infection, derived from discrimination, stigma and the impact of the HIV diagnosis, which increases the risk of suicide. It is observed that the greatest risk is in the six months after receiving the diagnosis and at the time when the symptoms of AIDS appear (Palacio, Valderrama, 2006). Pei JH, Pei YX, Ma T, Du YH, Wang XL, Zhong JP, Xie Q, Zhang LH, Yan LX, Dou XM (2021) conducted a systematic study, where they took as a sample 36 studies from 15 countries, finding that People with HIV have a prevalence of suicidal behaviors of 20.9%, 8.1% for suicidal ideation, and for plans and attempts 7.5% more frequent than in the general population. On the other hand, Hentzein M et al (2018) during 2010 in France identified that 4% of deaths among people with HIV were caused by suicide, a percentage higher than in the general population. According to the study "The prevalence of suicidal ideation and depression in our environment amounts to 20.8% and 23.2% respectively. Toxic substance use, an advanced current CDC state, impaired functionality, residing in a rural

area and having a personal psychiatric and suicide risk history were identified as potential risk factors for the onset of depression and suicide risk. Having a diagnosis > 2 years ago, a certain degree of lipodystrophy and coinfection with Hepatitis C Virus - HCV was correlated with the onset of depression" (Marengo Velázquez & Bogado Aquino, 2018). On the other hand, in Switzerland Keiser et al., (2010) followed 15,275 people with HIV during the years 1988 to 2008, finding that 150 people with HIV died by suicide. Wisnousky et al. conducted a systematic review and meta-analysis, where they identified 185,199 people with HIV with an overall incidence of completed suicide of 10.2/1000 people, suicide attempts 158.3/1000 and suicidal ideation 228.3/1000. Similarly, meta-regression showed that for every 10 people with HIV, the risk of completed suicide increased by 34 per 1000. They concluded that the risk of death by suicide is 100 times higher in people with HIV. Likewise, in a review conducted by Teti et al. in 2014, they identified 2,987 studies in Latin America and the Caribbean, and reviewed a total of 17 studies to determine potential risk factors for suicide, determining that factors such as family problems and previous suicide attempts were the predominant factors in completed suicide, especially in men. Now, as mentioned before, it is possible to determine a relationship due to the emotional impact derived from social construction, stigma, and the emotional impact that increases the risk of engaging in the behavior. However, in the national context, there are no studies that estimate the occurrence of suicidal attempts and HIV diagnosis.

#### Research methodology.

Inclusion	Exclusion
Reports generated in the suicide attempt notification form in 2020 and 2021	Any report that is incomplete, therefore, incomplete variables or lacks the standardized criteria for completing the database obtained from the aforementioned notification forms.

#### G. Variables:

**Table 1:** Inclusion and exclusion criteria

HIV diagnosis	Suicide attempt
Year, age, age group, nationality, sex, pregnant woman, clinical stage, cause of death, history of mental illness, associated disease	Sociodemographic factors, triggering factors, history of mental illness, <b>triggering</b> factor (chronic illness), age, age group, sex, pregnant woman

#### H. Variables excluded for not meeting criteria:

**Table 2:** Variables

HIV	Suicide attempt
ethnic identification, socioeconomic stratum, patient occupation, pregnant woman.	Patient occupation, education, socioeconomic status, ethnic identification, pregnant woman, triggering factor (relationship problems, death of a family member, financial problems, history of violence, history of suicidal behavior in a family member, spa use)

**Table 3:** Excluded variables

#### I. Statistical methods:

A frequency analysis was carried out for the years 2020-2021 for the two events of interest, HIV Diagnosis (year, age, age group, nationality, sex, pregnant woman, clinical stage, cause of death, history of mental illness, associated disease) and Suicide Attempt (sociodemographic factors, triggering factors, history of mental illness, previous suicidal behavior, history of affective disorder, age, age group, sex, pregnant woman), Auctores Publishing LLC – Volume 29(2)-916 www.auctoresonline.org ISSN: 2690-4861

#### C. Type of study:

This study is cross-sectional (2020-2021), comparative-correlational, generating a relationship between two moments. The type is observational, only describing variables, from the database generated from the notification forms Cod INS 356 (annex 1) that report the suicide attempt, and Cod INS 850 (annex 2) that reports HIV cases in the department of Tolima period 2020-2021.

#### D. Population:

It is made up of the total number of individuals reported from notification forms Cod INS 356 that report suicide attempts, and Cod INS 850 that reports HIV cases.

Thus, the following figures show: in 2020, there were 1,106 suicide attempts and 361 HIV diagnoses; in 2021, the rate was 933 suicide attempts and 335 HIV diagnoses.

#### E. Harvesting technique:

The technique used will be data collection, referring to obtaining the database of the department of Tolima generated from the notification forms for Suicide Attempt, Cod INS 356- Cod INS 850 and its attached basic data form collected by the Sivigila system that report suicide attempts and HIV diagnosis in the period 2020-2021.

#### F. Exclusion and inclusion criteria:

documentary cleaning following the inclusion and exclusion criteria and after data selection, an analysis of central tendency measures was carried out for quantitative variables and frequencies and proportions for qualitative variables. To determine the relationship and correlation between the two variables (HIV and Suicide Attempt), the Chi square test ( $X^2$ ) was applied, with this calculation result the P Value. In the same way, the SDG RATIO Value, Pearson correlation and  $R^2$  were found.

For this purpose, Excel software was used, which includes statistical analysis functions.

## 2.Results

In 2020, 44 new cases of HIV infection were reported in the municipality of Ibagué; while in 2021, there were 335. Regarding age, the average age for HIV diagnosis was 35 years, with a minimum of 3 years and a

maximum of 85 years between 2020 and 2021. Regarding sex, it is observed that HIV is diagnosed more frequently in males; during 2020, 35 men were identified, while in 2021, 260 were diagnosed. Regarding women, 9 women were notified, compared to 2021, where an increase of 75 was observed.

### a. sociodemographic variables HIV

SOCIODEMOGRAPHIC VARIABLES OF PEOPLE WITH HIV		2020	%	2021	%
Reporting frequency		44	11.60%	335	88.40%
AGE GROUP	adulthood	28	7.39%	167	44.06%
	youth	11	2.90%	131	34.56%
	old age	5	1.32%	27	7.12%
	adolescence	0	0	8	2.11%
	early childhood	0	0	2	0.53%
SEX	F	9	2.37%	75	19.79%
	M	35	9.23%	260	68.60%
NATIONALITY	Colombia	37	9.76%	325	85.75%
	Cuba	2	0.53%	0	0
	No data	4	1.06%	0	0
	Venezuela	1	0.26%	9	2.37%
	Guatemala	0	0.00%	1	0.26%
CLINICAL STADIUM	dead	1	0.26%	6	1.58%
	AIDS	4	1.06%	34	8.97%
	HIV	39	10.29%	295	77.84%
CAUSE OF DEATH	B230 Acute infection syndrome	1	0.26%	0	0
	NOT APPLICABLE	43	11.35%	0	0
	A419 Sepsis	0	0	1	0.26%
	B227 HIV disease	0	0	1	0.26%
	B24X HIV disease not otherwise specified	0	0	5	1.32%
	J158 Other pneumonias	0	0	1	0.26%
	J159 Bacterial Pneumonia	0	0	1	0.26%
	J189- Unspecified pneumonia	0	0	1	0.26%
	J960 Acute respiratory failure	0	0	1	0.26%
	NOT APPLICABLE	0	0	324	85.49%

**Table 4**Sociodemographic variables People with HIV.

Although this proposal focuses on the municipality of Ibagué, the notification form identifies the nationality of people living with HIV. In 2020, there were 37 new cases of HIV in people of Colombian nationality, 2 of Cuban origin, and 5 of Venezuelan origin. During 2021, there were 325 new cases of HIV in Colombian nationality, 1 new case of HIV in Guatemala, and 9 new cases of Venezuelan nationality. Now, it is important to identify the clinical stage of people with HIV at the time of notification. Here, it can be seen that, for 2020, the stages were: Death: 1;

AIDS: 4; HIV: 39. For 2021, the stages were: Death: 6; AIDS: 34; HIV: 295. Finally, it was identified that in 2020 the leading cause of death among people living with HIV was acute infection syndrome; in 2021, the leading causes of death were HIV disease not otherwise specified, acute respiratory failure, and respiratory illnesses such as pneumonia.

### b. Sociodemographic variables Suicidal behavior



VARIABLES SOCIOECONOMICAS		2020	%	2021	%
CANTIDAD DE REPORTES		1106	54,24%	933	45,76%
GRUPO ETAREO	JUVETUD - 17 A 28 AÑOS	489	23,98%	372	18,24%
	ADULTEZ - 28 A 59 AÑOS	334	16,38%	304	14,91%
	ADOLESCENCIA - 12 A 17	233	11,43%	208	10,20%
	VEJEZ - MAYORES DE 60 AÑOS	36	1,77%	43	2,11%
	INFANCIA - 6 A 11 AÑOS	14	0,69%	6	0,29%
SEXO	F	652	31,98%	528	25,90%
	M	454	22,27%	405	19,86%
ESTADO CIVIL	CASADO	73	3,58%	65	3,19%
	DIVORCIADO	17	0,83%	22	1,08%
	SOLTERO	751	36,83%	619	30,36%
	UNION LIBRE	248	12,16%	210	10,30%
	VIUDO	17	0,83%	17	0,83%
NACIONALIDAD	COLOMBIA	1099	53,90%	928	45,51%
	REPUBLICA DEMOCRÁTICA DEL CONGO	1	0,05%	0	
	VENEZUELA	6	0,29%	5	0,25%
FACTOR DESDE CADENANTE	ENFERMEDAD CRONICA	37	1,81%	33	1,62%
	PROBLEMA DE PAREJA+ENFERMEDAD CRONICA	4	0,20%	1	0,05%
	PROBLEMA DE PAREJA+ENFERMEDAD CRONICA+PROBLEMAS ECONOMICOS	8	0,39%	3	0,15%
	PROBLEMA DE PAREJA+ENFERMEDAD CRONICA+PROBLEMAS ECONOMICOS + MUERTE DE UN FAMILIAR+ACOSO ESCOLAR+PROBLEMA LEGAL+SUICIDIO DE UN FAMILIAR+MALTRATO FISICO-PSICOLOGICO-SEXUAL+PROBLEMAS LABORALES	1	0,05%	8	0,39%

Table 5 Sociodemographic variables Suicide Attempt

Suicide attempts in Ibagué occurred in 2020, with 1,106 attempts reported, while in 2021, 933 cases were recorded. Regarding the age group most frequently involved in this behavior, in 2020 it was youth aged 17 to 28, as in 2021, with 372 cases reported. Children are the group that reports the fewest cases; however, they represent a significant number for this population. Within the sex variable, women are the ones who attempt suicide most frequently; in 2020, there were 652 attempts, and in 2021, there were 528 suicide attempts. Regarding marital status, those who attempted suicide most frequently in both years were single people, followed by those in common-law marriages. Since Ibagué is a multicultural city, it is observed that in addition to Colombians, there are people of other nationalities who have resorted to suicide attempts, with Colombians being the most frequent, Venezuelans in second place, and the Republic of the Congo in third. Now, regarding the factors that trigger a suicide attempt, the notification form lists 10 factors: relationship conflicts, legal problems, chronic illness (painful or disabling), suicide of a family member or friend, financial problems, history of violence, death of a family member, work problems, school problems, and family problems. For this analysis, the variable chronic illness was considered, as was the presence of another factor along with chronic illness. Thus, in 2020, it was found that 37 people diagnosed with chronic illness attempted suicide; 33 people with chronic illness attempted suicide in 2021. Secondly, it was found that chronic illness, coupled with financial

and relationship problems, led to eight people attempting suicide in 2020. In 2021, the number of people who attempted suicide was chronic illness, relationship problems, the death of a family member, school problems, and legal problems. This suggests that suicidal behavior has multiple causes.

#### c. Frequency of HIV diagnosis in suicidal behavior

To determine the relationship, the following data were taken into account:

**Hypothesis:** Suicide attempt variable is associated with HIV.

**Null hypothesis:** Suicide attempt variable is not associated with HIV.

**HIV:** is a nominal qualitative variable.

**Suicide Attempt:** qualitative variable payroll.

**Sample:** non-probabilistic for convenience.

It is important to mention that the statistically significant value for all the results that will be presented below is P value <0.05.

For the suicide attempt variable, between the years 2020-2021, 2,039 people attempted suicide. In 2020 with a total of N: 1,106 ( 54.23%) , while for the year 2021 N: 929 ( 45.57%) , of which 4 ( 0.20%) are People with HIV.

FREQUENCY OF SUICIDE ATTEMPTS			
YEAR		N	%
2020	Suicide attempt	1106	54.23%
	Suicide attempt in people with HIV	4	0.20%
TOTAL		2039	100.00%

Table 6 Frequency of Suicide Attempt in People with HIV

However, during 2020 there were no suicide attempts in people living with HIV, however, in 2021 there were 4 cases of suicide attempts in people living with HIV. These data may hide underreporting, since the design of the instruments from which information on suicide attempts is

collected includes chronic diseases, but it is not specified which ones. The statistical analyses show:  $\chi^2 = 2383.83675$ ,  $P = 0$ ;  $r = -1$ ;  $r^2 = 1$ ; **SDG RATIO VALUE** = 0.00165975.

DESCRIPTION OF VARIABLES							
SUICIDE ATTEMPT		NO SUICIDE ATTEMPT	SDG VALUE RATIO	$\chi^2$	P	r	$r^2$
People with HIV	4	375	0.00165975	2383.83675	0	-1	1
People who do not live with the virus.	2035	0					

**Table 7:** Description of variables

Taking into account these results, it can be said that:

- There does not appear to be a strong relationship between suicide risk and HIV status.
- It is observed that the risk of attempted suicide in the city of Ibagué is 0.0001%.
- It would be important to examine the mental health care variable in future studies. This would help determine whether there are protective factors.
- The null hypothesis is rejected with a  $\chi^2$  value. There are discrepancies between the frequencies of the variables. The actual value is less than 5. The result is unreliable.
- The P value determines that the relationship between the variables is null.
- Now, the value of r indicates that with perfect inverse correlation, it shows that although suicide attempts are increasing in the city of Ibagué, it is not related to the increase in HIV diagnoses.

### 3.Conclusions.

**With this study, the following conclusions can be reached :**

Microinteractionism contributes to defining a conceptual framework for analyzing HIV stigma and suicidal behavior; stigma as a damaged image; and HIV stigma as linked to the categories of prejudice, discrimination, and abandonment. Here, it is important to expand the research in the Colombian context, emphasizing the relationship with health services. The revelation and redefinition of the category of interaction as a subsystem of the social system, without denying the existence of other subsystems and, above all, their belonging to a larger order, allows us to complement the available quantitative data series on HIV and suicidal behavior with an approach to the social determination of health and illness. Social interaction and changes in society will impose norms, bringing to light differences derived from the status, sex, nationality, and skin color of the interactants. This will be related to the entire "porous" situation of variable meanings that are attempted to be monitored. In this sense, we seek to control the effects of our actions on stigma and suicidal behavior. In today's society, there is a stigma toward people living with HIV, which in practice leads to the emergence of various types of discrimination. One of the goals of the World Health Organization's 90-90-90 strategy is to reduce this stigma. In Colombia, work continues toward this objective. Advances in health technologies, both in diagnosis and treatment, have allowed for a new understanding of HIV as a chronic degenerative disease. This has led to improved quality of life and life expectancy. However, in Colombia, mental health professionals need to be trained in HIV (currently, training in this area is exclusively for

physicians) in order to create and strengthen HIV prevention and treatment adherence programs.

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