

## HIV and suicide attempts in the municipality of Ibagué-Colombia during the years 2020-2021

### VIH e intento suicida en el municipio de Ibagué-Colombia durante los años 2020-2021

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#### ABSTRACT

##### Keywords:

mental health, human immunodeficiency virus, performance, suicidal behavior.

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.

#### RESUMEN

##### Palabras clave:

salud mental, virus de inmunodeficiencia humana, deseo de muerte, performance, conducta suicida.

El presente estudio analiza la relación entre intento suicida y diagnóstico VIH en el municipio de Ibagué Colombia durante los años 2020 - 2021. El estudio tiene un corte observacional (datos obtenidos de las fichas de notificación del Instituto de Vigilancia en Salud Pública de Colombia), transversal, comparativo y de relación entre dos eventos. Se observa que durante el año 2020 se tuvo 1106 intentos suicidas y 361 diagnósticos por VIH; para el año 2021 una frecuencia de 933 intentos suicidas, y 335 diagnósticos por VIH. También se presenta una caracterización sociodemográfica de las poblaciones analizadas. Resultados: En el 2020 con un total de N: 1106 (54,23%), mientras que para el año 2021 N: 929 (45,57%), de los cuales 4 (0,20%) son Personas Viviendo con el virus- PERSONAS CON VIH. Ahora bien, en el análisis estadístico se observa:  $\chi^2 = 2383,83675$ ,  $P = 0$ ;  $r = -1$ ;  $r^2 = 1$ ; VALOR ODS RATIO = 0,00165975. conclusiones: No parece haber una relación fuerte entre el riesgo de suicidarse y tener VIH. Se observa que el riesgo del intento de suicidio en la ciudad de Ibagué es de 0,0001%; con el valor de  $\chi^2$  se rechaza la Hipótesis nula; con el valor de P se determina que la relación entre las variables es nula.

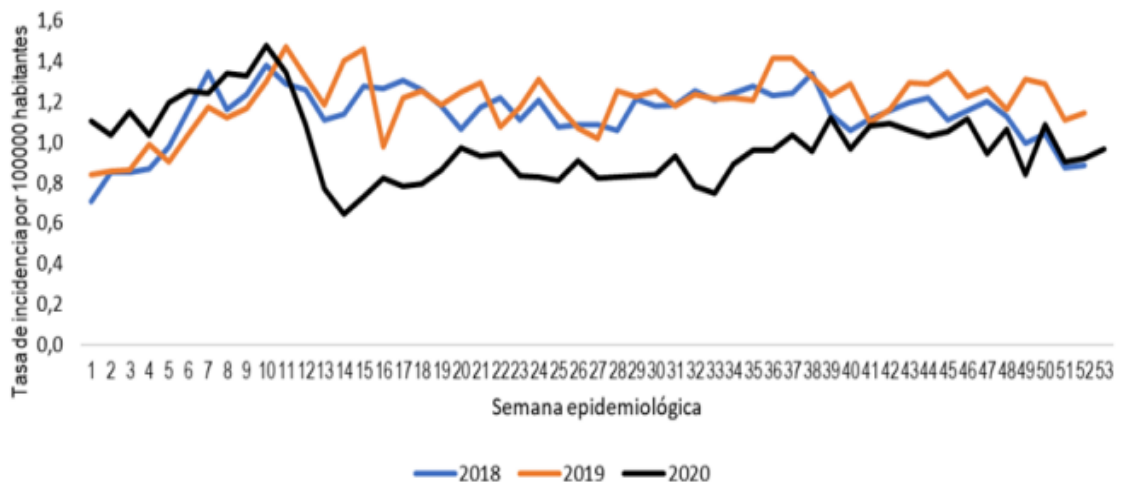
## Introduction

This is a study that seeks to identify the occurrence of attempted suicide 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 special interest for the Public Health Surveillance System in Colombia-sivigila. Self-inflicted injury behavior is measured since 2016, "since then a gradual increase in the national incidence rate is observed" (sivigila;2020).

### Figure 1

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



Note: in 2020, 26 202 cases of attempted suicide were submitted to Sivigila. The rate of attempted suicide per 100 000 population during 2020 presented a decrease compared to 2018 and 2019. In recent years, there has been an upward trend, with a higher rate of increase among women. The rate per 100 000 in 2020 starts with an increasing trend during the beginning of the year, same behavior shown in 2018 and 2019. During week 13 there is a decrease. However, during the three years mentioned above, it is possible to see peaks and troughs. Taken from *Instituto Nacional de Salud, Colombia. Suicide Attempt 2020 event report. Available in: [https://www.ins.gov.co/buscador-eventos/Informesdeevento/INTENTO\\_DE\\_SUCIDIO\\_2020.pdf](https://www.ins.gov.co/buscador-eventos/Informesdeevento/INTENTO_DE_SUCIDIO_2020.pdf)*

According to the statistical data presented by Sivigila (2020), 43% of the 37 departments that make up the Colombian territory presented rates higher than the national rate, i.e. 52.0 per 100,000 inhabitants. The department of Tolima has the highest rates.

On the other hand, the monitoring of the behavior of HIV diagnosis at the national level comparing year 2019-2020 has seen an increase in those of 14.6%, the High Cost Accounts-CAC highlight that an increasing trend is evident; for 2019 Tolima had a rate of 223 Persons with HIV, while for 2020 Persons with HIV are observed. 241.

However, the presence of different risk factors such as genetic-biological, social-demographic factors, family and childhood characteristics and personality traits and cognitive styles are estimated for the occurrence of suicidal behavior (R, 2019), with HIV being a risk factor for the occurrence of self-injurious behavior (Palacios; Rueda; Valderrama 2006).

### Justification

The relationship between HIV and suicide carries culturally constructed **social stigmas** that require a counter-intuitive approach based on the data sets available from the health sector. This is a process in which society categorizes people based on traits that are rejected or

undervalued and that have been constituted as negative categories. These categories are constituted as defect, fault or disadvantage that are incongruent with the stereotypes of the different population and age groups that are prevalent in HIV.

The stigmas associated with HIV and suicide show the negative side of a person with respect to normality (as defined by the majority and dominant group in society). In this sense, it is pertinent to clarify that: discrimination is the action through which certain attributes (genotypical 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 socio-historical behaviors that belong to its past and are transmitted from generation to generation. (Margulis and Urresti, 1998, p. 292; Martin-Pérez; 2021).

In addition to the physical and emotional dependence that increases when both physical and psychological characteristics require higher levels of care, it generates responses, which on many occasions will express a type of discrimination: abandonment and self-abandonment that leads to suicidal ideation or behavior. 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 he/she lives and a second phase would be learning the consequences of living with HIV including suicidal behavior.

The counter-intuitive approach based on epidemiological data allows taking into account the carrier's relationships with both the informal and formal community to which he/she belongs are decisive. Stigmatization, in this case in the face of HIV and suicide, allows the identification of common life situations that derive in a joint classification, being able in turn to organize around them assumptions related to human nature: with the intersectionality of ethnicity, age group, socioeconomic level and gender that allow complementing the reduction of the complexity carried out by the HIV data and its correlations and possible causalities with suicide.

Based on the above, the question arises: Is there a relationship between the increase of HIV diagnosis and the increase of attempted suicide in the municipality of Ibagué Tolima during the years 2020 - 2021? It should be taken into account that in Colombia and in Tolima there are no studies or analyses of this type, which seek to relate two variables. Similarly, in the notification forms for the two events, these variables are not addressed; in the notification form for attempted suicide, chronic disease is explored, while for the HIV notification form, the clinical information does not address psychological history or the course of current suicidal ideation.

### **Objectives**

#### **A. General Objective**

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

#### **B. Specific Objective**

To profile sociodemographic variables of people diagnosed with HIV.

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

### **Theoretical and conceptual framework**

The process of construction of social identity, 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 that can be found in it. Then social exchange makes it likely that when interacting with a stranger, the first appearances allow us to foresee what category he is in and what his attributes are, i.e. what his social identity is.

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-Perez (2021) indicates that this is produced by primary reactions such as fear of the unknown, contagion/transmission and the constant search for virus transmission. Similarly, the same author relates stigma to the lack or misinformation 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 vulnerability of the individual.

Thus, stigma can be considered a social and multidimensional phenomenon that affects the person with HIV, not only in physical but also in mental health. In this area, there are manifestations such as: loss of self-esteem, poor self-concept, feeling of vulnerability, loss of control in the face of 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 couple relationships, difficulties in performing their work or occupational activities, difficulties in leisure and recreational activities, economic concerns, changes in the conception of life, guilt, irritability, depressive symptoms, and anxiety and/or stress (Palacios; Rueda; Valderrama 2006). In addition, one of the tipping points for suicidal ideation and behavior is associated with the personal history that accompanies and sustains the extension of stereotypes.

In the class on stigma and discrimination taught in the Master of Human Immunodeficiency at the Universidad Rey Juan Carlos de España by Professor Martin-Pérez (2021), he relates studies in which people with HIV have felt excluded or discriminated against in the following way: In Myanmar, 11% of people with HIV have been excluded from family events; in China, 79% of people reported fear of being the center of gossip; in the United Kingdom, 22% reported physical aggression; and in Ecuador, 12% reported that they were expelled from educational institutions because of their HIV status.

Palacios et al (2006) as well as Lopera (2010) conclude that in Colombia there is a lack of more quantitative research on discrimination and stigma among people with HIV. Ramos-Jaraba in her study with transgender women (2021) shows how 15.8% of PLHIV avoid health services, and 45% felt discriminated against. This, according to the author, could be related to the country's heteronormative discourse, which could have other repercussions such as reduced access to education or stable employment. Something striking in this research is the doctor-patient relationship, since the results show 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 stigmatization towards HIV patients in the first cycles of training. Similarly, an article in Web Infobae shows that, in a study conducted in Colombia during 2019 by the Ministry of Health, it can be seen that in Colombia some HIV-positive people avoid telling their family and coworkers about their status. Cabrera (2022) mentions that in a study conducted 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 greater impact in the education, health and labor sectors, places of daily life, which could or are supposed to put people with HIV at a disadvantage in their social relations.

A topic of interest in this study is centered on how the person with HIV interacts in the social environment. As is well known, the HIV patient is in a physical and psychological vulnerability derived from social stigma, opening the question: How could these interactions be understood? From micro-interactionist sociology, the units of analysis refer to structured situations and casual aggregations, which have the affective dimension at the core of the process (Rizo; 2015). These situations are mediated by physical co-presence or face-to-face encounters (López and Reyes, 2010, p. 115). In other words, people in everyday life move in a

limited field of study known as the "interaction subsystem". This subsystem is complemented by each of the subsystems of the social system, which are mediated by the intersubjective and communication (Belvedere, 2012, p. 14). These two aspects, intersubjectivity and communication, are of vital importance considering that they intervene in the interpretation of stigmas, i.e., when a stigma is internalized, it gives way to self-stigmatization, when the subject appropriates social attitudes. On the other hand, there is perceived stigma, when the person with HIV has internalized stigma and anticipates discrimination, and confirmed stigma, which refers to actual experience of discrimination (Martin-Pérez, 2021).

Interactionism focuses its attention on face-to-face interaction, this being the scenario where we develop the affective component that builds 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 he is not only acting around a role, but he is also interpreting it. The performance has its own emotional aspects and those of others, being the basis of our social construction and daily interactions. This actor plays the role that corresponds to him/her, he/she does things to be observed by others. On the other hand, it defines that the interaction will exert norms, making differences emerge 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 with relative frequency among patients with HIV infection, derived from discrimination, stigma and the impact of HIV diagnosis, which increases the risk of suicide, it is observed that the highest risk is in the six months after receiving the diagnosis and at the time when AIDS symptoms 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 review, where they sampled 36 studies from 15 countries finding that PLHIV 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 of People with HIV were caused by suicide, a higher percentage 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 status, impaired functionality, residing in a rural area, and having a history of psychiatric and personal suicidal risk were identified as potential risk factors for the occurrence of depression and suicidal risk. Possessing a diagnosis > 2 years, a certain degree of lipodystrophy and coinfection with Hepatitis C- HCV Virus was correlated with the occurrence of depression" (Marengo Velázquez & Bogado Aquino, 2018). On the other hand, in Switzerland Keiser et al., (2010) followed up 15,275 People with HIV during the years 1988 to 2008 finding that 150 people with HIV died by suicide.

Wisnousky et al. They conducted a systematic review and meta-analysis, where, they identified 185,199 persons with HIV with an overall incidence of completed suicide of 10, 2/1000 persons, 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 suicide completion 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 in Latin America and the Caribbean 2987 studies, they reviewed a total of 17 studies to determine the possible risk factors for suicide, determining that factors such as family problems, previous suicide attempt, were the predominant factors in consummated suicide in males especially.

Now, as mentioned above, it is possible to determine a relationship by the emotional impact derived from the social construct, the stigma and the emotional impact that increases

the risk of the presence of the behavior. However, in the national context, there are no studies that estimate the occurrence of attempted suicidal behavior and HIV diagnosis.

## Method

### Study

The present study is a cross-sectional (2020-2021), comparative-correlational study that generates a relationship between two points in time. The type is observational, it only describes variables, from the database generated from the notification forms Cod INS 356 (annex 1) that report suicide attempts, and Cod INS 850 (annex 2) that reports cases of HIV in the department of Tolima period 2020-2021.

### Population

It is constituted by the total number of individuals reported from the notification forms Cod INS 356 reporting attempted suicide, and Cod INS 850 reporting HIV cases.

Thus, in 2020 there were 1106 suicide attempts and 361 HIV diagnoses; in 2021 there were 933 suicide attempts and 335 HIV diagnoses.

### Collection technique

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

### Exclusion and inclusion criteria

**Table 1**

*Inclusion and exclusion criteria*

Inclusion	Exclusion
Reports generated in the notification form for suicide attempts in 2020 and between 2021 and 2021	Any report that is incomplete, therefore, incomplete variables or without the standardized criteria for filling out the database obtained from the aforementioned notification forms.

**Table 2**

*Variables*

HIV diagnosis	Suicide attempt
year, age, age group, nationality, sex, pregnant woman, clinical stage, cause of death, history of mental illness, associated illness, etc	sociodemographic factors, triggering factors, history of mental illness, triggering factor (chronic illness), age, age group, sex, pregnant woman, etc

**Table 3**

*Excluded variables*

HIV	Attempted suicide
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ethnic identification, socioeconomic stratum, patient's occupation, pregnant woman.	patient's occupation, socioeconomic stratum, ethnic identification, pregnant woman, triggering factor (marital problems, death of a family member, economic problems, history of violence, history of suicidal behavior of a family member, spa consumption)
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**Statistical methods**

A frequency analysis was performed 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 illness) and suicide attempt (sociodemographic factors, triggering factors, history of mental illness, previous suicidal behavior, history of affective disorder, age, age, age group, sex, pregnant woman), previous suicidal behavior, history of affective disorder, age, age group, sex, pregnant woman), document purification following the inclusion and exclusion criteria, and after data selection, analysis of measures of central tendency for quantitative variables and frequencies and proportions for qualitative variables was performed. To determine the relationship and correlation between the two variables (HIV and Suicide Attempt), the Chi-square test (X<sup>2</sup>) was applied, with the result of calculating the P value, the ODS RATIO value, Pearson's correlation and R<sup>2</sup> were also found. For this purpose, Excel software was used, which has statistical analysis functions.

**Results**

By 2020 in the municipality of Ibagué, there were 44 new cases of HIV infection; while by 2021, there were 335. In reference to age, a mean age of 35 years, a minimum of 3 years and a maximum of 85 years is observed for HIV diagnosis between 2020 and 2021. In reference to sex, it is observed that HIV is diagnosed more frequently in the male sex; during 2020, 35 men were identified, while for the year 2021, 260 men were diagnosed. In reference to the female sex, 9 women were notified, compared to the year 2021, where an increase of 75 women was observed.

**Sociodemographic variables HIV**

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

SOCIODEMOGRAPHIC VARIABLES HIV-POSITIVE PEOPLE		2020	%	2021	%
WITH HIV					
Reporting frequency		44	11,60%	335	88,40%
ETAREO 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
	Not available	4	1,06%	0	0
	Venezuela	1	0,26%	9	2,37%
	Guatemala	0	0,00%	1	0,26%
CLINICAL STAGE	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 Septicemia	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%

Although this proposal focuses on the municipality of Ibagué, the notification form identifies the nationality of persons with HIV. In 2020, there were 37 new cases of HIV among Colombian nationals, 2 of Cuban origin and 5 of Venezuelan origin. During the year 2021, there were 325 HIV-positive persons of Colombian origin, 1 HIV-positive person from Guatemala and 9 cases of Venezuelan nationality.

However, it is important to identify the clinical stage of persons with HIV at the time of notification. Here it is observed that, for the year 2020 for the stadiums Muerto: 1; AIDS: 4; HIV: 39. By the year 2021 for the Muerto stadiums: 6; AIDS: 34; HIV: 295.

Finally, in 2020 the main cause of death in people with HIV was Acute Infection Syndrome; in 2021 the main causes of death were: HIV disease without other specification Acute Respiratory Failure, and respiratory diseases such as pneumonia.

### ***Sociodemographic variables Suicide Attempted Behavior***

#### **Figure 2**

*Sociodemographic variables Suicide Attempt*



VARIABLES SOCIOECONOMICAS		2020	%	2021	%
CANTIDAD DE REPOTES		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 DESDENCADENANTE	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%

Attempted suicidal behavior in Ibagué occurred in the year 2020, 1106 attempts were reported, while during the year 2021, 933 cases were registered. In reference to the age group with the most frequent occurrence of this behavior, in 2020 it was youth between 17 and 28 years of age, as well as in 2021 with 372 reported cases. The group reporting the fewest cases is childhood, however, it represents a significant number for this population. Within the sex variable, women are the most frequent suicide attempters; in 2020 there were 652 attempts, and in 2021 there were 528 suicide attempts. In terms of marital status, in the two years, those who presented more suicide attempts were single, followed by the population in a free union. Being Ibagué 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 Congo in third place.

However, in reference to the factors that trigger suicide attempts, the notification form considers 10 factors: marital 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, family problems.

For this analysis, the variable chronic disease was taken into account, and the presentation of another factor together with chronic disease. Hence, in 2020 it was found that 37 people with a diagnosis of chronic disease made suicide attempt; 33 people with chronic disease attempted suicide during 2021. In second place, it was found that chronic illness, more economic problems and with couple problems during 2020 presented 8 people with suicide attempt, while in 2021 people who attempted suicide presented chronic illness, couple problems, death of a family member, school problems, legal problems. This shows that suicidal behavior is multicausal.

### ***Frequency of HIV diagnosis in suicidal behavior***

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

**Hypothesis:** Variable suicide attempt is associated with HIV.

**Null hypothesis:** Variable suicide attempt is not associated with HIV.

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

**Suicide Attempt:** qualitative variable.

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

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

For the suicide attempt variable, between 2020-2021, 2039 people attempted suicide. In 2020 with a total of N:1106 (54.23%), while by 2021 N: 929 (45.57%), of which 4 (0.20%) are persons with HIV.

**Table 5**

Frequency of suicide attempt

FREQUENCY OF SUICIDE ATTEMPT			
YEAR		N	%
2020	Suicide attempt	1106	54,23%
2021	Suicide attempt	929	45,57%
	Suicide Attempt in People with HIV	4	0,20%
<b>TOTAL</b>		<b>2039</b>	<b>100,00%</b>

However, in 2020, there were no suicide attempts in people with HIV, however, in 2021 there were 4 cases of suicide attempts in people with HIV. These data may hide an underreporting, since the design of the instruments used to collect information on suicide attempts contemplates chronic diseases, but does not specify which one. Statistical analysis shows:  $\chi^2= 2383.83675$ ,  $P= 0$ ;  $r= -1$ ;  $r^2= 1$ ; **ODS RATIO VALUE= 0.00165975**.

**Table 6**

Description of variables

DESCRIPTION OF THE VARIABLES							
SUICIDE ATTEMPT		NO SUICIDE ATTEMPT	ODS RATIO VALUE	$\chi^2$	P	r	$r^2$
People with HIV	4	375	0,00165975	2383,83675	0	-1	1
People not living with the virus.	2035	0					

Considering these results, it can be said that:

- There does not appear to be a strong relationship between the risk of suicide and having HIV.
- It is observed that the risk of attempted suicide in the city of Ibagué is 0.0001%.
- It would be important to review the variable of mental health care in subsequent studies. In this way, it could be determined whether there are protective factors.
- With the value of  $\chi^2$  the null hypothesis is rejected. There are discrepancies between the frequencies of the variables. Actual value less than 5. Unreliable result.

- With the value of P, it is determined that the relationship between the variables is null.
- However, the value of r indicates that the perfect inverse correlation shows that although suicide attempts are increasing in the city of Ibagué, it is not related to the increase in HIV diagnoses.

## Discussion and conclusions

Micro-interactionism contributes to delimit a conceptual framework for the analysis of HIV stigma and suicidal behavior; stigma, as an impaired image and HIV stigma, linked to the categories of: prejudice, discrimination and neglect. 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, of its belonging to a larger order, makes it possible to complement the quantitative series of available data on HIV and suicidal behavior with a focus on the social determination of health and disease.

Social interaction and changes in society will exert norms, making differences emerge derived from: status, sex, nationality and skin color of the interactants. It will have to do with the whole "porous" situation of variable meanings that we try to keep an eye on. In this sense, we seek to control the effects of our actions from stigma and suicidal behavior.

In today's society there is a stigma towards people living with HIV, which in turn allows various types of discrimination to arise in practice. One of the objectives of the World Health Organization's 90-90-90 strategy is to reduce this stigma. In Colombia, work continues on this objective.

Advances in health technologies, both in diagnosis and treatment, have allowed a new conception of HIV as a chronic degenerative disease. This has improved the quality of life and life expectancy. However, in Colombia there is a need to train Mental Health professionals 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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