ITAM

SALUD EMOCIONAL EN LA COMUNIDAD LGBTQ+: UN ANÁLISIS DE MEDIACIÓN

TESIS

QUE PARA OBTENER EL TITULO DE

LICENCIADO EN ECONOMÍA

PRESENTADO POR

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Resumen:

Este estudio aborda la violencia sexual como un factor intermediario que afecta la salud mental de la comunidad LGBTQ+. Inicialmente, se revisa la literatura centrada en tres aspectos principales: la salud mental de las personas LGBTQ+, la conexión entre la violencia sexual y la salud mental, y la incidencia de violencia sexual dentro de la comunidad LGBTQ+. Posteriormente, se emplea la Encuesta Nacional sobre Diversidad Sexual y de Género (ENDISEG) para identificar hallazgos en México que concuerdan con los reportados en la literatura analizada. El trabajo culmina con un análisis de mediación, demostrando que la violencia sexual actúa como uno de los mecanismos a través de los cuales los individuos LGBTQ+ experimentan deterioro en su salud mental.

<u>Introduction</u>

In the evolving discourse on mental health, the emotional well-being of the LGBTQ+ community garners important attention due to its complexity and the distinct challenges faced by this demographic. This study attempts to dissect the intricate mediating factors between LGBTQ+ identity and emotional health. More precisely, by adopting a mediation analysis approach, this study reveals some layers of the process through which LGBTQ suffer emotional problems, including depression, suicidal thoughts, and others.

Our study explores related literature and focuses on mental health and sexual violence among LGBTQ individuals comparing with their non-LGBTQ counterparts; and the propensity that victims of sexual violence have to present symptoms of lesser mental health. Then, it uses ENDISEG (Encuesta Nacional Sobre Diversidad Sexual y de Género) survey on the mexican population, searching for similar conclusions to the ones found in different parts of the world.

Finally, this works concludes with Baron and Kenny's mediation approach to show that the adverse mental health experiences among LGBTQ+ individuals can be significantly explained by their experiences of sexual violence, rather than solely by their LGBTQ+ identity.

<u>Literature</u>

Existing literature has documented both a strong relationship between being part of the LGBTQ+ population and mental health outcomes, and between sexual abuse and mental health. There have been studies that prove LGBT individuals experience more health issues than non-LGBT people. These publications not only discuss about medical conditions such as HIV, obesity and cancer, but also extensively cover mental health issues like, suicide ideation, depression and anxiety, especially after being exposed to conversion therapy. [13] It appears that being part of this community is associated with psychological suffering arising from external factors.

Mental health among LGBTQ+ individuals

Historically, publicly identifying oneself as a non-heterosexual or non-cisgender person has been challenging. During the early stages of life, young people grapple with accepting their feelings and must decide (or guess) when and how to express themselves to friends, family members, and eventually, coworkers. As they mature, the primary concern shifts from family acceptance to dealing with institutional acceptance. [8][1]

In the United States, LGBT students had been reported to have a higher likelihood of experiencing depressive symptoms and attempting suicide. [8][3] In Canada, one study showed that most of the transgender people from their sample had seriously consider suicide in the past year. [4] More general evidence about low emotional health associated with being part of the LGBT community can be found in countries such as Thailand, Chile, Europe, Australia and China. [5][6][7][8]

A 2021 UNESCO report showed that half of LGBTQ+ students in Europe have suffered bullying based on their sexuality and 83% had witnessed negative comments to someone else based on their sexual orientation, gender identity, gender expressions or variations of sex characteristics. [17]

Literature on older LGBT individuals also shows social abuse by receiving verbal insults, threats and being ignored by the police due to their membership to a minority group. However, their lack of health is widely explained by medical mistreatment due to the difficulty of having an insurance and more because institutional support took some time to accept and treat them as equals. This also made these people being less likely to seek support or to trouble with when and how to reveal their identity and orientation. The result is that older LGBT adults have higher risk of mental and physical illness tan the other adults. [1]

Sexual violence and mental health

Regarding the issue of sexual abuse in general, this type of violence has a tremendous impact in the overall health of the people who suffer from it. Literature usually focuses on women (as they are the primary victims). However, both females and males have similar behavior after being sexually. They both report lower health status and are associated with suicide ideation, depression and anxiety.

Being physically assaulted is usually associated with lower physical health, whereas sexual assault is associated with mental health issues. However, they both often come with emotional abuse, which affects the daily lives of victims and future behaviors. One study in Japan had victims reporting to have problems with performing usual activities, walking, concentrating, and memory. [9] Female veterans, who were sexually assaulted during their military service in the US, and many during their childhood, were most likely to report chronic health problems and use prescription medications for mental health problems. They were also less likely to have completed college. Risky sexual behaviors were also identified as consequences of sexual violence. This includes unprotected sex, sex under the influence of alcohol or other substances, sex work, among others. [10] One study in Ethiopia found that domestic violence was linked to risky sexual behaviors. [11]

One interesting difference between males and females is that males are less likely to report sexual assault due to fear of negative reactions, and also to blame themselves for the incident. [12]

Sexual violence on LGBTQ+ community

Sexual abuse has profound implications for its victims, particularly those belonging to marginalized communities such as the LGBTQ+. Sexual violence can manifest physically through forced penetration and assault, as well as psychologically through verbal harassment, intimidation and social pressure. The LGBTQ+ community, already struggling with societal prejudices and systemic discrimination, faces unique challenges when confronted with sexual abuse. A review of recent literature highlights the multifaceted effects of such abuse on LGBTQ+ individuals.

The 2017 National Crime Victimization Survey revealed that sexual and gender minorities in the United States face a significantly higher risk of violent crimes including rape, sexual assault and aggravated assault, at rates 3 to 4 times greater than the general population. [14] There is discussion about underreported sexual violence among young students due to distrust in support services, fear of embarrassment, and a belief that reporting would not lead to meaningful action. [15]

In 2020, a national survey conducted in Australia among LGBTQ+ individuals revealed that nearly half of the respondents (48.6%) had experienced some form of sexual violence in their lifetime. Further investigations about the specific nature of such incidents led to a 2022 study in New South Wales, indicating a significant rate of LGBTQ+ participants (80%) who had encountered incidents such as groping, uncomfortable leering, receiving sexually offensive comments, and unwanted flirtatious behavior. [16]

The report by "*SinViolencia LGBTI*" covering data from 10 countries, reveals that between 2014 and 2020, there were at least 1,403 murders of LGBTQI individuals in Latin-America due to prejudicial motives, out of a total of 1,949 reported cases. Colombia, Mexico and Honduras were accountable for most of these deaths. Nevertheless, the organization highlighted that including the figures from Brazil could potentially elevate the total count of LGBTQI fatalities to 3,599. [18] 1

Literature suggests that violence stemming from prejudice is a form of sexual violence. [21]

The overwhelming evidence from different parts of the world, specially the west, highlights the prevalence and severity of diverse forms of sexual violence against LGBTQ+ individuals.

Related literature

Given the evidence in the existing literature, one might wonder the extent to which being victims of sexual violence is one of the mediating forces behind the relationship between LGBTQ+ identification and mental health outcomes, which is the purpose of this study. As such, this paper of course relates to those that have attempted to identify these mediators.

One particular study worth considering utilized mediation analyses to demonstrate how discrimination accounted for higher emotional distress among young LGBT males and females in the US. This study employed symptoms of depression, self-harm, and suicidal ideation as indicators of emotional distress, which were highlighted as significantly more prevalent among our subjects of interest compared to heterosexuals. In addition to this, youth participants were asked, *'Sometimes people feel they are discriminated against or treated badly by others. In the past 12 months, have you felt discriminated against because someone thought you were gay, lesbian, or bisexual?'* Those who answered "yes" exhibited significantly higher rates of self-harm and suicidal ideation compared to those who answered 'no', as well as higher levels of depressive symptomatology. However, the study could only establish that perceived discrimination strongly mediates the relationship between young LGBT males and depressive symptomatology. [2]

ENDISEG

This study uses data from The National Survey on Sexual and Gender Diversity (ENDISEG) 2021, which was developed by Mexico's National Institute of Statistics and Geography (INEGI) to understand the characteristics related to sexuality, gender identity, and sexual orientation of the population aged 15 and older. Its aim is to identify individuals whose identity or orientation doesn't conform to hetero-patriarchal societal norms (LGBTI+ community). The survey's sample size is 44,189 participants who represent 97.2 millions of people in Mexico. [19]

Precedents

In the 2000s, Mexico witnessed significant legislative advancements in support of sexual and gender diversity. On May 17, 2007, the country marked a monumental step by establishing it as the Day of the Fight Against Homophobia. Just three years later, in 2010, this day was recognized as the Day of Tolerance and Respect for Preferences, following proposals by international organizations such as the United Nations and the Pan American Health Organization. This recognition was further solidified in 2014 when May 17 was officially decreed as the National Day Against Homophobia. [19]

Health law reforms were introduced in 2009, acknowledging the needs of transgender individuals. These reforms allowed for hormone treatments and psychotherapy for those undergoing gender transition. A pivotal moment occurred in 2015 when the Supreme Court of the Nation (SCJN) unequivocally declared that no individual could be denied rights based on their sexual orientation. In the same breath of progressive action, the Federal District Government proclaimed November 13 as the official day to celebrate and recognize Transgender Persons. [19]

In 2016, same-sex marriage was approved, with the SCJN asserting that marriage should not be an institution limited only to heterosexual couples. Alongside this, the regions of CDMX and Coahuila permitted same-sex couples the right to adopt. Furthermore, after consistent efforts and resolutions from bodies like CONAPRED in 2011 and a landmark ruling by the Supreme Court in 2014,

institutions such as IMSS and ISSSTE began to recognize same-sex partners as rightful beneficiaries. These changes collectively underscored Mexico's evolving stance towards a more inclusive and diverse society. [19]

Several non-probabilistic surveys have aimed to gather information about the characteristics and living conditions of the LGBTI+ community in Mexico, with online surveys being the most common approach. In March and April of 2018, CONAPRED, supported by CNDH, conducted the Survey on Discrimination Due to Sexual Orientation and Gender Identity (ENDOSIG). Its goal was to understand the opinions, expressions, and experiences of discrimination, exclusion, and violence faced by individuals based on their sexual orientation, gender identity, and expression. This survey targeted individuals 16 years or older, including gays, lesbians, bisexuals, transgender individuals, and others with non-normative sexual orientations and gender identities. [19]

Additionally, the 2017 National Survey on Discrimination (ENADIS) by INEGI in collaboration with CONAPRED included a question about self-declared sexual orientation. More recently, the INEGI conducted the 2020 National Civic Culture Survey (ENCUCI) which added questions about gender identity and sexual orientation. However, it should be noted that neither of these surveys were specialized in the LGBTI+ topic. [19]

Various countries have conducted studies focusing on the LGBTI+ community, utilizing different methodologies:

- United Kingdom: The Annual Population Survey (APS) by the National Statistics Office has included information on sexual orientation since 2012, detailing aspects such as sex, region, and marital status. The APS estimates are based on self-perceived sexual identity of the UK population aged 16 and above. [19]

- Canada: Canada conducted the Canadian Community Health Survey (CCHS) in 2015. The CCHS, designed for those aged 18 and above, employed a multi-stage stratified design and published data on sexual orientation by sex and age groups. It also explored topics like mental health among the community. [19]

- United States: Several surveys, including the National Health and Nutrition Examination Survey (NHANES) from 2009-2014, the National Survey of Family Growth (NSFG) from 2011-2015, and others, have variables related to sexual orientation and gender identity. A prominent study conducted by the Human Rights Campaign in partnership with The Trevor Project in 2012, "Growing Up LGBT in America," surveyed over 10,000 LGBT youths aged 13-17, revealing that nearly 40% identified as bisexual. [19]

- New Zealand: The Youth Health and Wellbeing Survey, initiated in 2000, included over 27,000 young participants over 11 years. Administered by the Ministry of Social Development, representative samples of high school students in 2001, 2007, and 2012 completed comprehensive anonymous surveys. Among the topics was "Gender Identity, Sexuality, and Sexual Health," capturing how young individuals identified in terms of their gender and sexual behaviors. [19]

Implementation

In December 2019, INEGI conducted the field test for the National Survey on Sexual and Gender Diversity (ENDISEG) in collaboration with the National Council to Prevent Discrimination (CONAPRED). The objective was to test a questionnaire through direct interviews with selected individuals aged 15 and over from households, assessing its effectiveness and collecting insights for refining the survey methodology. This field test informed adjustments to the survey tool and confirmed various methodological aspects for the main 2021 ENDISEG survey. Given the sensitive nature of topics like gender identity and sexual orientation, ensuring confidentiality was paramount. As a solution, ENDISEG 2021 utilized audio interviews to gather sensitive information, ensuring privacy since even the interviewers couldn't identify the responses provided. These unique features position the ENDISEG 2021 as a pioneering survey conducted by a national statistical office. [19] 2

In addition to the ENDISEG 2021, the ENDISEG WEB, conducted online in 2022, was a qualitative survey freely accessible to anyone, especially targeting the LGBTI+ community. While both targeted those aged 15 and over, only the ENDISEG WEB required an email for participation. The questionnaires for both were similar, but the ENDISEG WEB's primary aim was to understand the LGBTI+ community, gathering 14,364 responses, of which 7,060 were from LGBTI+ individuals.

Data and Methods

The econometric model applied to this study consist of various linear regressions that link different forms of emotional problems with being a member of the LGBT+ community. Then, the model incorporates indicators of sexual violence as mediators. However, before doing the mediation analysis, it's convenient present some basic data and statistic descriptions, as well as every variable's constitution.

LGBT

The variable "$LGBTQ+_i$" is constructed from ENDISEG data. Participants were not directly asked if they identify as part of the community. Instead, they were queried about their gender, sex, sexual orientation and gender identity, enabling the authors to infer their belonging in the LGBT+ minority.

　　The information used to identify an LGBT+ person came from the following characteristics of the participant:

　　- A male person who had their first intimate or sexual encounter with a man.

　　- A female person who had their first intimate or sexual encounter with a woman.

　　- A person who had their first intimate or sexual encounter with someone whose sex is neither female nor male.

　　- A person of any sex who has had sexual relations with someone of the same sex, either in the past year or at any point in their lifetime.

　　- A person of any sex who has felt, or feels, attraction to someone of the same sex.

　　- A person of any sex whose sexual orientation is identified as "lesbian," "gay or homosexual," "bisexual," or any non-heterosexual orientation.

　　- A person who does not identify with the sex assigned to them at birth.

　　All participants who didn't count with any of the above characteristics were labeled as non-LGBT+. The final sample consisted of 7368 LGBT+ individuals and 36821 non-LGBT+.

Emotional discomfort

The survey directly inquired about participant's emotional disturbances, focusing on their current state, particularly over the past 12 months leading up to the survey. Utilizing data from ENDISEG on emotional health, we identified five key indicators crucial for this study:

- Insomnia.
- Depression.
- Stress.
- Changes in appetite or weight, either loss or gain.
- Feelings of anguish, fear, or anxiety.
- Suicide ideation

The first part of the results of this study examines the prevalence of the above health conditions and compared the responses from the LGBTQ population to those from cisgender heterosexual individuals. For instance, 35.29% of LGBTQ individuals reported experiencing depression in the past year, compared to 29.88% of non-LGBTQ participants who reported the same.

Sexual violence

ENDISEG includes a section on social rejection, which features four pertinent questions for this study due to their focus on violence directed at the victim. These questions have been utilized as indicators of sexual violence:

- People who were sexually threatened or attacked.
- People who were harassed by propositions for sexual relations in exchange for payment.
- People who were forced to have sex.
- People who were groped without consent.

The comparison between participants shows that LGBTQ minorities are more likely to be victims of sexual violence than their counterparts.

Nevertheless, these indicators allow us to search for a link between mental health problems and sexual violence. Taking all the survey's population, we can

extract a subset of individuals who were victims of sexual violence, identified as those reporting experiences corresponding to the previously specified indicators. Then, we see the proportion of individuals, from that sample, who also had insomnia, stress, depression, change in appetite or weight, feelings of anguish, fear or anxiety, and suicide ideation.

Mediation analysis

The data extracted lead us to hypothesize that one of the reasons LGBTQ individuals suffer from emotional health issues is due to experiencing sexual violence. The statistical model proposed utilizes sexual violence as an intermediary factor between the individual and emotional disturbances.

Mediation analysis is a technique used to examine the underlying mechanisms between an independent variable and a dependent variable via a third variable. In essence, X influences Y through M, meaning that being part of the LGBTQ community is associated with poorer emotional health through the experience of sexual violence. This method allows us to estimate an indirect effect that the independent variable has on the dependent variable through the mediator, as well as the direct effect that the independent variable has on the dependent one.

Following the Baron and Kenny's approach, we first look for a significant relationship between the independent variable and the dependent variable,

$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$, and we expect β_1 to be significant.

Then, we see if the independent variable is associated with the mediator,

$M_i = \alpha_0 + \alpha_1 X_i + \epsilon_i$, and we expect α_1 to be significant.

Finally, we regress the dependent variable on both the independent variable and the mediator,

$Y_i = \delta_0 + \delta_1 X_i + \delta_2 M_i + \omega_i$. With the final specifications we expect δ_2 to be significant, and δ_1 to be smaller in absolute value than β_1 as this would mean that the mediator explains some of the effect that the independent variable has in the independent variable.

Literature on mediation would denote β_1 as the direct effect and the difference of β_1 and δ_1 as the indirect effect. The idea of $\beta_1 - \delta_1$ is that the mediator is reducing the effect of the independent variable. [20]

Figure 1
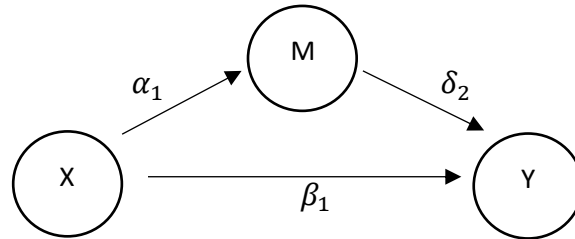
This study constructed six regression models to evaluate the likelihood of reporting each type of emotional discomfort, comparing LGBTQ individuals to their non-LGBTQ counterparts. Subsequently, each model was adjusted by introducing 4 control variables (mediation variables), to assess the extent to which the coefficient associated with being LGBTQ changes.

Results

Based on the data analyzed in this study, we concur with existing literature on three key points: First, LGBTQ individuals are more likely to experience lower emotional health compared to their non-LGBTQ counterparts. Second, individuals within the LGBTQ community face sexual violence at higher rates than those outside of it. Third, there is a significant difference in levels of emotional distress between those who were victims of sexual violence and those who weren't.

Figure 2
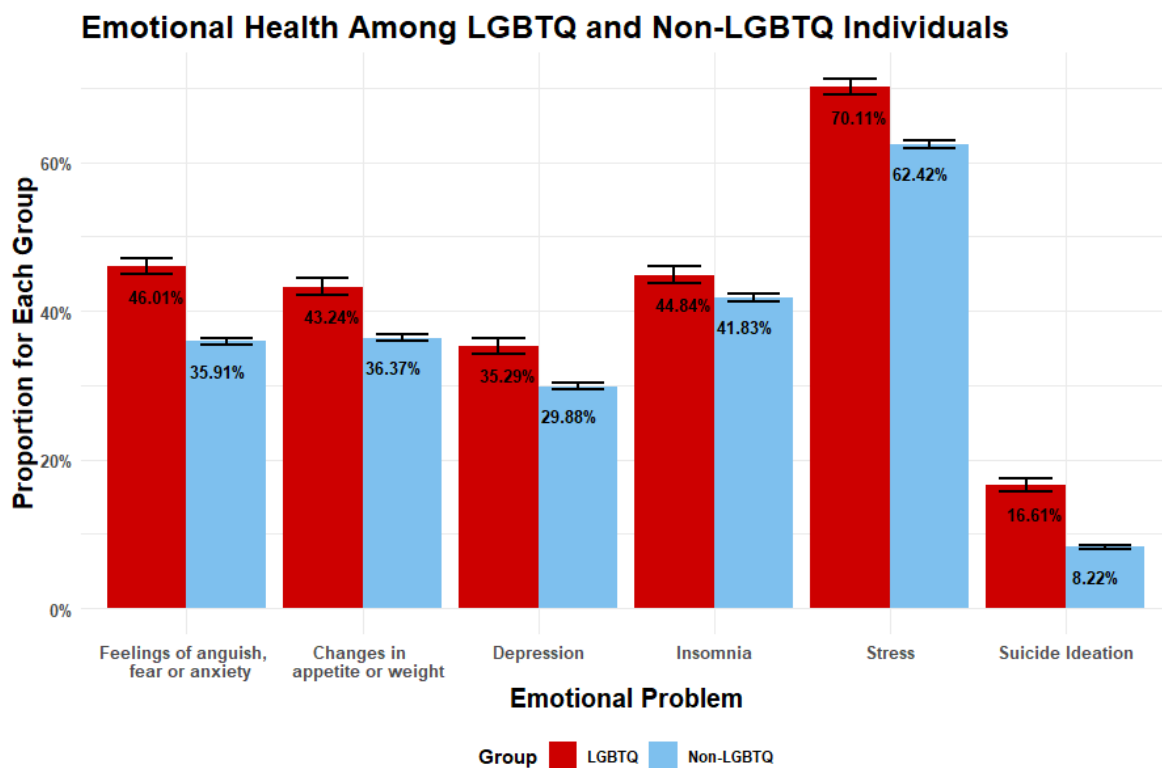
This graph presents a comparison of emotional health issues between LGBTQ individuals and Non-LGBTQ individuals across six indicators: Feelings of anguish, fear or anxiety; Changes in appetite or weight; Depression; Insomnia; Stress; and Suicide ideation.

Each pair of bars represents the proportion of each group reporting a specific emotional health problem. The red bars denote LGBTQ individuals, and the blue bars represent Non-LGBTQ individuals. The values on top of the bars indicate the

percentage of respondents within each group that have reported experiencing the respective emotional problem.

From the graph, it is apparent that a higher percentage of LGBTQ individuals report each type of emotional indicator compared to Non-LGBTQ participants. The error bars on each bar represent confidence intervals, which provide a range of values within which we can be confident the true value lies.

Overall, the graph indicates that emotional health problems are more commonly reported among LGBTQ individuals than Non-LGBTQ individuals across all the indicators presented.

Figure 3

Sexual Violence Among LGBTQ and Non-LGBTQ Individuals
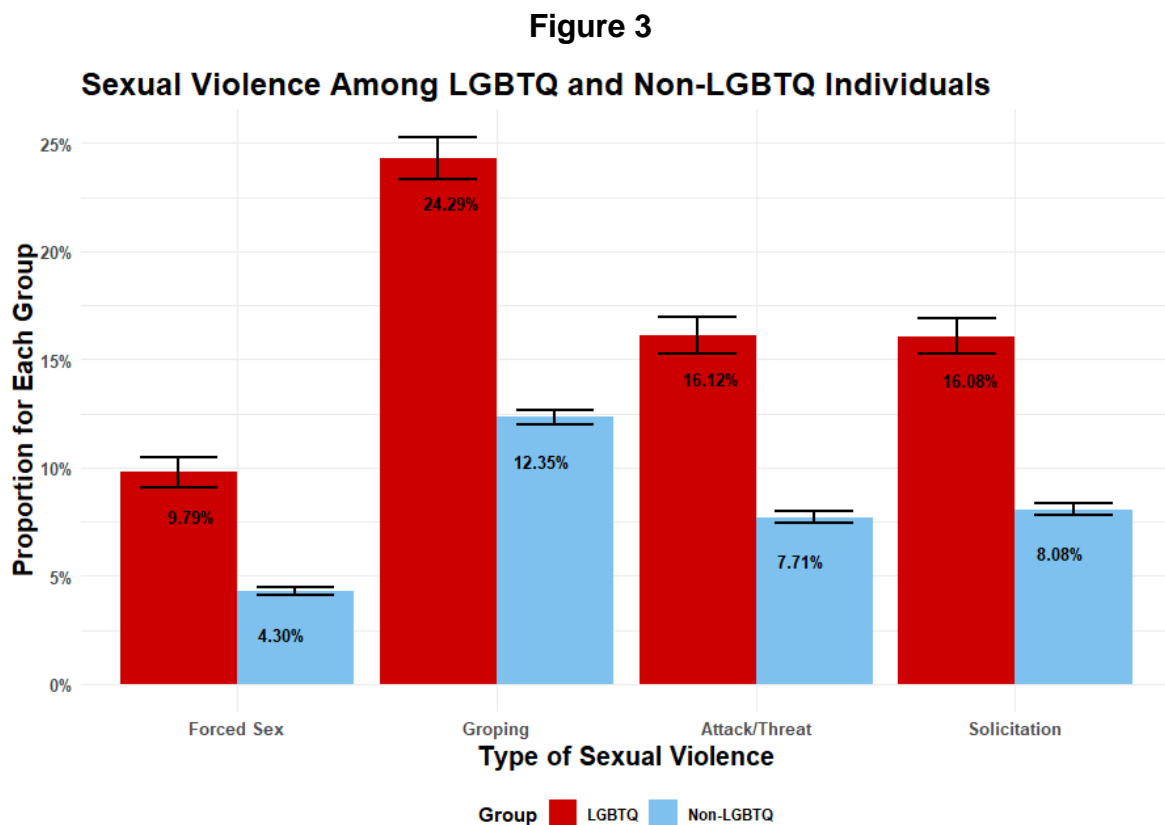
The second graph focuses on the prevalence of different types of sexual violence among LGBTQ and Non-LGBTQ individuals. This bar chart compares the proportion of each group that has reported experiencing four distinct forms of sexual violence: Forced Sex, Groping, Attack/Threat, and Solicitation.

As before, red bars represent LGBTQ individuals, and blue bars represent Non-LGBTQ individuals. The percentages displayed above each bar indicate the

proportion of respondents from each group who have reported experiencing the respective form of sexual violence.

Confidence intervals suggest that, even accounting for potential sampling variability, the differences observed between the LGBTQ and Non-LGBTQ individuals are likely to be consistent with the broader population.

This graph provides a clear indication that LGBTQ individuals report a higher incidence of various forms of sexual violence compared to their Non-LGBTQ counterparts.

Figure 4

Mental Health Among Victims and Non-Victims of Sexual Violence
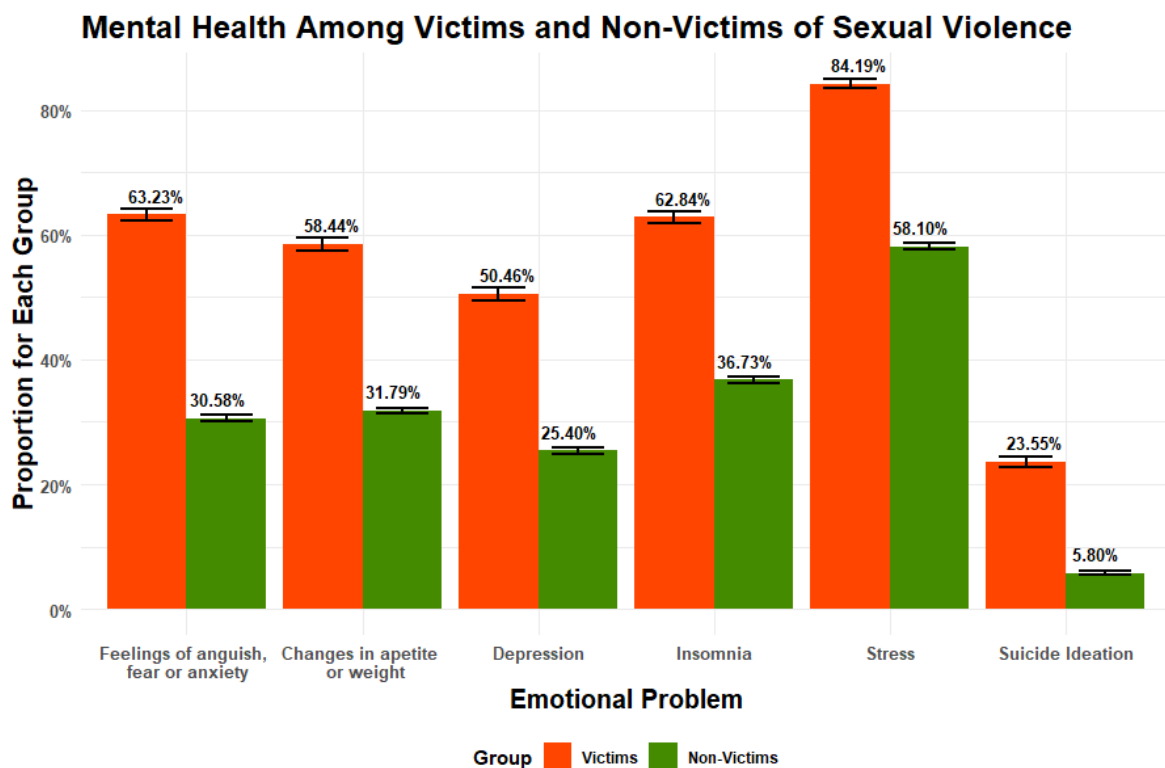
Finally, this third graph contrasts the emotional health of individuals who have been victims of sexual violence with those who have not, across the same range of emotional problems that were used on the first graph.

The graph utilizes orange bars to represent victims and green bars for non-victims, with each pair of bars corresponding to the following emotional health issues: Feelings of anguish, fear, or anxiety; Changes in appetite or weight; Depression; Insomnia; Stress; and Suicide ideation.

The percentages placed above each bar signify the proportion of respondents within each group who have experienced the respective emotional issues. The confidence intervals on each bar demonstrate the robustness of the data, reinforcing the significant differences in reported emotional health problems between victims and non-victims of sexual violence.

The data highlights the considerable mental health impact of sexual violence on victims, with marked disparities across all indicators of emotional health problems.

Regression analysis

The following table presents the results from a series of linear probability models that examine the association between identifying as LGBTQ and reporting various types of emotional discomfort. The dependent variables for each of the six regressions correspond to different emotional health issues: Feelings of anguish, fear or anxiety; Changes in appetite or weight; Depression; Insomnia; Stress; and Suicide ideation.

Table 1

	Dependent variable:					
	Insomnia	Stress	Depression	Change in Appetite or Weight	Anguish, Fear or Anxiety	Suicide Ideation
	(1)	(2)	(3)	(4)	(5)	(6)
LGBTQ+	0.030***	0.077***	0.054***	0.069***	0.101***	0.084***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.004)
Constant	0.418***	0.624***	0.299***	0.364***	0.359***	0.082***
	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)
Observations	44,189	44,189	44,189	44,189	44,189	44,189
R^2	0.001	0.004	0.002	0.003	0.006	0.011
Adjusted R^2	0.0005	0.004	0.002	0.003	0.006	0.011
Residual Std. Error (df = 44187)	0.494	0.480	0.461	0.484	0.483	0.293
F Statistic (df = 1; 44187)	22.761***	157.594***	84.432***	123.869***	268.460***	503.746***

Source: Own elaboration   *p<0.1; **p<0.05; ***p<0.01

      The coefficients for the variable "$LGBTQ +_i$" across the models provide the change in the probability of reporting each type of emotional discomfort, controlling for other factors in the model. The number in brackets indicates the coefficient's standard error.

      The constant term in each model represents the predicted probability of the emotional discomfort for non-LGBTQ individuals, assuming that all other variables in the model are set to zero.

      The asterisks (***) on each coefficient indicate the statistical significance at 99% confidence, implying a strong association between identifying as LGBTQ and reporting the emotional discomfort in question. For instance, the coefficient of 0.030 suggests that identifying as LGBTQ is associated with a 3 percentage point increase in the probability of reporting insomnia.

Mediated Relationship

Upon incorporating specified control variables, each linear model yielded distinct outcomes, but they all shared the same story. The coefficient for the LGBTQ variable significantly decreased upon the introduction of sexual violence indicators. These indicators acted as mediators, reducing the LGBTQ coefficient by approximately 3 percentage points. Notably, the absolute value of the LGBTQ coefficient became smaller than that of the mediator's coefficient.

The next table presents present linear models that relate the mediator with the independent variable. We are following the Baron and Kenny's approach. So, we require a significant relationship between the "$LGBTQ+$" variable and each of the mediators.

Table 2

	Dependent variable:			
	Sexual Attack or Threat	Solicitation	Forced Sex	Groping
	(1)	(2)	(3)	(4)
LGBTQ+	0.084***	0.080***	0.055***	0.119***
	(0.004)	(0.004)	(0.003)	(0.004)
Constant	0.077***	0.081***	0.043***	0.124***
	(0.001)	(0.002)	(0.001)	(0.002)
Observations	44,189	44,189	44,189	44,189
R^2	0.012	0.010	0.008	0.016
Adjusted R^2	0.012	0.010	0.008	0.016
Residual Std. Error (df = 44187)	0.286	0.290	0.221	0.348
F Statistic (df = 1; 44187)	530.988***	466.415***	377.104***	723.954***

Source: Own elaboration $^{*}p<0.1; ^{**}p<0.05; ^{***}p<0.01$

What we showed in the next six tables, is how the LGBTQ coefficient changes when mediators are introduced. We start with a simple linear probability model where the independent variable "$LGBTQ+$" is associated with each type of emotional discomfort. The initial simple model appears on the far left of each table. We then observe how the coefficient changes when controlling for each mediator individually. Finally, we present a regression including all variables, "$LGBTQ+_i$" and mediators on the far right of each table. These results are important as they reflect the last step

in Baron and Kenny's approach, where different types of sexual violence experiences explain some of the impact that belonging to the LGBTQ community has on lower emotional health.

Table 3

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable:					
	Insomnia					
LGBTQ+	0.030***	0.006	0.009	0.014**	−0.002	−0.014**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Sexual Attack or Threat		0.285***				0.118***
		(0.008)				(0.010)
Solicitation			0.259***			0.137***
			(0.008)			(0.009)
Forced Sex				0.297***		0.073***
				(0.011)		(0.012)
Groping					0.265***	0.160***
					(0.007)	(0.008)
Constant	0.418***	0.396***	0.397***	0.406***	0.386***	0.375***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Observations	44,189	44,189	44,189	44,189	44,189	44,189
R^2	0.001	0.028	0.024	0.018	0.035	0.049
Adjusted R^2	0.0005	0.028	0.024	0.018	0.035	0.049
Residual Std. Error	0.494	0.487	0.488	0.490	0.485	0.482
F Statistic	22.761***	631.534***	536.090***	409.164***	810.049***	460.070***

Source: Own elaboration $^{*}p<0.1; ^{**}p<0.05; ^{***}p<0.01$

The first model (far left) in each following tables displays the same results as Table 1, which are consistent with Figure 2, where the comparison of emotional health between LGBTQ and non-LGBTQ participants can be seen. For example, according to Model 1 in Table 3, that the baseline predicted probability of reporting insomnia for a non-LGBTQ participant is 41.8%. The "$LGBTQ+$" coefficient marks the difference between both types of participants, which can also be observed significantly on the bar graph displayed as Figure 2.

When we control for mediators "$Sexual\ Attack\ or\ Threat$", "$Solicitation$" and "$Groping$" in Table 3 (Models 2, 3 and 5), the difference between LGBTQ and non-LGBTQ becomes non-significant. This means that people who reported those 3 types of sexual violence are more likely to report insomnia, wether they belong to the LGBTQ community or not. However, Model 4 indicates that having been forced to have sex at least once in a lifetime is associated with a 1.4% increase in the likelihood of reporting insomnia for those within the LGBTQ+ community.

Table 4

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable:					
	Stress					
LGBTQ+	0.077***	0.055***	0.058***	0.064***	0.046***	0.036***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Sexual Attack or Threat		0.257***				0.106***
		(0.008)				(0.010)
Solicitation			0.240***			0.130***
			(0.008)			(0.008)
Forced Sex				0.237***		0.017
				(0.010)		(0.012)
Groping					0.256***	0.171***
					(0.006)	(0.008)
Constant	0.624***	0.604***	0.605***	0.614***	0.593***	0.584***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Observations	44,189	44,189	44,189	44,189	44,189	44,189
R^2	0.004	0.027	0.025	0.015	0.038	0.048
Adjusted R^2	0.004	0.027	0.024	0.015	0.038	0.048
Residual Std. Error	0.480	0.474	0.475	0.477	0.472	0.469
F Statistic	157.594***	609.609***	555.344***	347.000***	866.872***	448.566***

Source: Own elaboration   *p<0.1; **p<0.05; ***p<0.01

Model 1 in Table 4 shows that the predicted probability of reporting stress for LGBTQ+ individuals is 70.1%. That is a 7.7% percentage points increase over the baseline probability for non-LGBTQ individuals, which is 62.4%. Every single mediator explains a higher chance of reporting stress, but it doesn't change the positive sign nor significance that the "$LGBTQ+$" coefficient has, meaning that even if we control for sexual violence indicators, people who belong to this minority will be more likely to self-report stress. The inclusion of these controls, however, does reduce the magnitude of the coefficient directly measuring identification. Once controls for sexual violence are included, identifying as LGBTQ increases the probability of reporting being stressed by 3.6 percentage points over non-LGBTQ individuals. The number is less than half the one observed in column 1.

Table 5

	Dependent variable:					
	Depression					
	(1)	(2)	(3)	(4)	(5)	(6)
LGBTQ+	0.054***	0.028***	0.035***	0.035***	0.025***	0.011*
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Sexual Attack or Threat		0.312***				0.155***
		(0.008)				(0.009)
Solicitation			0.241***			0.110***
			(0.007)			(0.008)
Forced Sex				0.351***		0.142***
				(0.010)		(0.011)
Groping					0.246***	0.116***
					(0.006)	(0.007)
Constant	0.299***	0.275***	0.279***	0.284***	0.268***	0.257***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Observations	44,189	44,189	44,189	44,189	44,189	44,189
R^2	0.002	0.039	0.025	0.030	0.036	0.059
Adjusted R^2	0.002	0.039	0.025	0.030	0.036	0.059
Residual Std. Error	0.461	0.452	0.456	0.455	0.453	0.448
F Statistic	84.432***	905.550***	562.785***	688.152***	829.556***	551.104***

Source: Own elaboration $^{*}p<0.1;\ ^{**}p<0.05;\ ^{***}p<0.01$

Every model in Table 5 has different values than Table 4, but they share the same narrative; depression is more commonly reported among LGBTQ+ individuals. Upon incorporating the mediators of sexual violence, the analysis continues to show a significant difference in the likelihood of reporting depression between LGBTQ+ individuals and their non-LGBTQ+ counterparts, but much smaller in magnitude (close to one fifth once all controls are included).

Just like in Table 3, the results of Model 1 are consistent with Figure 2. For instance, in the bar graph we showed that 35.29% of LGBTQ+ individuals reported themselves to have depression, against 29.88% of non- LGBTQ+, 5.41 percentage points significantly different. Model 1 in Table 4 indicates the same difference in terms of predicted probability. In Tables 3-8 Model 1 will show the same relationship as Figure 2, but the direct relationship between LGBTQ+ identification and the outcome variable decreases in magnitude with the inclusion of each of the indicators of experienced sexual violence.

Table 6

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable:					
	Change in Apetite or Weight					
LGBTQ+	0.069***	0.044***	0.048***	0.052***	0.038***	0.024***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Sexual Attack or Threat		0.294***				0.133***
		(0.008)				(0.010)
Solicitation			0.263***			0.142***
			(0.008)			(0.008)
Forced Sex				0.297***		0.069***
				(0.010)		(0.012)
Groping					0.261***	0.149***
					(0.006)	(0.008)
Constant	0.364***	0.341***	0.342***	0.351***	0.331***	0.321***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Observations	44,189	44,189	44,189	44,189	44,189	44,189
R^2	0.003	0.033	0.028	0.021	0.038	0.054
Adjusted R^2	0.003	0.033	0.028	0.021	0.038	0.054
Residual Std. Error	0.484	0.476	0.477	0.479	0.475	0.471
F Statistic	123.869***	751.149***	629.569***	478.416***	871.013***	506.974***

Source: Own elaboration — *$p<0.1$; **$p<0.05$; ***$p<0.01$

As explained before, every single mediator took away approximately 3 percentage points from the "$LGBTQ+$" coefficient, which places sexual violence as one of paths LGBTQ individuals experiences lesser mental health.

Table 7

	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable:					
	Anguish, Fear or Anxiety					
LGBTQ+	0.101***	0.071***	0.077***	0.081***	0.062***	0.048***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Sexual Attack or Threat		0.354***				0.156***
		(0.008)				(0.010)
Solicitation			0.296***			0.142***
			(0.008)			(0.008)
Forced Sex				0.362***		0.091***
				(0.010)		(0.012)
Groping					0.325***	0.199***
					(0.006)	(0.008)
Constant	0.359***	0.332***	0.335***	0.344***	0.319***	0.307***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Observations	44,189	44,189	44,189	44,189	44,189	44,189
R^2	0.006	0.050	0.037	0.033	0.060	0.081
Adjusted R^2	0.006	0.050	0.037	0.033	0.060	0.080
Residual Std. Error	0.483	0.472	0.475	0.476	0.470	0.464
F Statistic	268.460***	1,156.135***	859.463***	765.150***	1,421.246***	773.730***

Source: Own elaboration — *$p<0.1$; **$p<0.05$; ***$p<0.01$

Table 8

	(1)	(2)	(3)	(4)	(5)	(6)
			Dependent variable:			
			Suicide Ideation			
LGBTQ+	0.084***	0.064***	0.071***	0.068***	0.063***	0.052***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Sexual Attack or Threat		0.241***				0.127***
		(0.005)				(0.006)
Solicitation			0.167***			0.065***
			(0.005)			(0.005)
Forced Sex				0.282***		0.135***
				(0.006)		(0.007)
Groping					0.177***	0.073***
					(0.004)	(0.005)
Constant	0.082***	0.064***	0.069***	0.070***	0.060***	0.052***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Observations	44,189	44,189	44,189	44,189	44,189	44,189
R^2	0.011	0.066	0.038	0.056	0.055	0.090
Adjusted R^2	0.011	0.066	0.038	0.056	0.055	0.090
Residual Std. Error	0.293	0.285	0.289	0.286	0.287	0.281
F Statistic	503.746***	1,562.944***	883.464***	1,315.292***	1,276.149***	875.777***

Source: Own elaboration   *p<0.1; **p<0.05; ***p<0.01

Figure 2 and Model 1 in Table 8 shows that LGBTQ+ participants are twice as likely to report suicidal thoughts compared to non-LGBTQ+ individuals. The mediation coefficients hit their lowest values in Table 8, but still have a higher absolute value than the "$LGBTQ+$" coefficient. This observation indicates that, among the six indicators of emotional discomfort analyzed, the relationship between being a part of the LGBTQ+ minority group and experiencing suicidal ideation is relatively stronger.

Conclusion

At the beginning of this study, we discussed worldwide evidence suggesting that: first, LGBTQ individuals exhibit poorer emotional health; second, there exists a relationship between emotional health and experiences of sexual violence; and third, the LGBTQ community is more prone to suffering from sexual violence. The ENDISEG survey enabled us to delve into Mexico's LGBTQ community, uncovering results that align with those from other global studies.

By examining the outcomes from Mexico, we hypothesized that sexual violence is a contributing factor to the emotional discomfort experienced by LGBTQ people, which inspired a mediation analysis. Utilizing Baron and Kenny's approach, we discovered that various types of sexual violence reports successfully mediate the relationship between this minority group and their lower emotional health. This study highlights one pathway through which lesser mental health in not inherently due to individual's LGBTQ status, but rather due to how society treats them because of their belonging to this community.

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