

2-28-2025

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Recommended Citation

Sitorus R , Misnaniarti M , Legiran L , et al. Socio-Epidemiological Perspectives of Sexual Trauma Experiences and Influential Factors on Sexual Orientation in Men Who Have Sex with Men. *Kesmas*. 2025; 20(1): 41-47
DOI: 10.7454/kesmas.v20i1.2106
Available at: <https://scholarhub.ui.ac.id/kesmas/vol20/iss1/6>

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Abstract

The complexity of sexuality and sexual trauma experiences, including harassment, unwanted touching, sexual urges, and forced sexual intercourse, should not be underestimated because of the tendency to initiate adverse psychosocial impacts. Sexual harassment can increase mental health risks, which may influence sexual orientation decisions. This quantitative study, using a cross-sectional design, aimed to determine a relationship between sexual trauma experiences and sexual orientation in men who have sex with men (MSM). This study population was MSM living in Palembang and Prabumulih City, with a sample size of 216 respondents. The proportion of respondents with homosexual orientation was 57.1%, and the proportion having sexual trauma experiences was 42.3%. The multiple logistic regression identified a significant relationship between sexual trauma experiences and sexual orientation in MSM with a p-value of 0.02, an adjusted odds ratio of 2.71, and a 95% CI of 1.17-6.26. These results suggested a higher risk of a different sexual orientation among traumatized MSM compared to MSM without one after controlling access to pornographic content and correcting parenting patterns. Sexual trauma has been shown to affect individual sexual orientation; therefore, special attention is needed due to the impact on future life behavior.

Keywords: men who have sex with men, parenting, pornographic content, sexual trauma

Introduction

Humans are born with male and female sexes throughout the world, including in Indonesian society, where religion plays a crucial role in determining sexual orientation. Traditionally, sexual orientation is expected to conform to the rule that males are attracted to females and vice versa. This term is conceptualized as an aspect of the body that develops early in life and remains stable over time.¹ Sexual orientation is a multidimensional construct referring to persistent emotional, romantic, or sexual attraction to another individual.²

Building on the term described initially, sexual motivation is the deepest commitment of the body related to emotions that significantly influence the conduct of many ambiguous actions.³ The complexity of human sexuality should not be underestimated, while the main reason motivating individuals to engage in sex is the high level of satisfaction commonly obtained. From an evolutionary perspective, the motivational nature of sexual experience is best explained as an adaptation to ensure reproductive success.³

A person's sex does not guarantee the possession of a preferred sexual orientation, as differences in sexual orientation and the relationship to mental health begin in childhood.⁴ This corresponds to the report by Clark *et al.* that sexual orientation differences in psychopathology start at the age of nine.⁵ Conceptually, sexual orientation comprises three aspects: identity (how an individual identifies the sexual orientation possessed), behavior (the gender of sexual partners), and attraction (the gender of individuals attracted to).²

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Received : September 10, 2024

Accepted : February 17, 2025

Published: February 28, 2025

The World Health Organization (WHO) is increasingly aware of the health service barriers faced by the lesbian, gay, bisexual, and transgender (LGBT) community, leading to a significant impact on general health and well-being.⁶ The latest analysis by the Joint United Nations Programme on HIV/AIDS (UNAIDS) using the Global AIDS Monitoring System until 2019 and less than the last five years in 38 countries shows that the global average proportion of adult men who have sex with men (MSM) was 1.9%, consisting of 1% observed in the past 12 months.⁷

Gay individuals with same-sex sexual orientation are driven by experiences of sexual abuse during childhood.⁸ Sexual trauma experiences include abuse, unwanted touching, sexual urges, and forced sexual intercourse, escalating to suicide.⁹ Child abuse occurs worldwide with a prevalence of 8-31% for males and 3-17% for females.¹⁰ This causes trauma and many survivors of sexual abuse experience various detrimental psychosocial impacts.¹¹

LGBT is a minority group that is not accepted by society, thus having a negative impact on social life.¹² As a result, many hide their sexual orientation from family members and the environment, which becomes a psychological burden.^{13,14} LGBT individuals coming out about their sexual identity have reported experiencing negative treatments, which include inappropriate language, stigma, harassment, discrimination, homophobic reactions, condescending attitudes, unfriendliness, and hostility.¹⁵

Stigma towards sexual minorities contributes to sexual trauma, which impacts health disparities based on sexual orientation in society. Stigma in minorities affects the life journey of individuals in shaping physical and mental health and sexual orientation.^{16,17} Sexual trauma requires special attention that can help overcome the trauma and regain emotional and psychological stabilities because its consequences affect future life behavior. Therefore, this study focused on examining socio-epidemiological factors contributing to the formation of male-specific sexual orientation. The aim was to determine the relationship between sexual trauma experiences and sexual orientation. Additionally, the study will support prevention program measures and improve the effectiveness of public health interventions.

Method

This study used a quantitative method with a cross-sectional design to analyze the relationship between sexual trauma experiences and sexual orientation in the male-specific sexual orientation group. The population investigated was all MSM under the reach of a non-profit organization based in Palembang City working on rehabilitation and empowerment of drug addicts; assistance to people with HIV (ODHIV); assistance to child workers and school dropouts to obtain the right to education and health; outreach and assistance to communities at risk of TB, STIs, and HIV; assistance and empowerment of prison inmates; and public health and environmental health. Furthermore, the minimum sample size was 216 respondents, comprising a hidden population selected through purposive sampling, calculated using the two-tail hypothesis test formula with a significance level of 5% and a test power of 80%.¹⁸

The study instrument was a structured questionnaire that had been tested for validity and reliability. The validity test revealed a strong correlation coefficient ($r = 0.62-0.74$), while Cronbach's alpha value obtained from the reliability test was $0.831 > 0.6$. The main independent variable examined was sexual trauma experience, while the dependent variable was sexual orientation. Various potential confounding factors considered were sexual education, access to pornographic content, parenting patterns, and relationships with family.

The operational definition of sexual orientation was the respondents' confessions regarding persistent emotional, romantic, or sexual attraction to other individuals. For subsequent analysis, sexual orientation was particularly categorized into "homosexual" and "bisexual" groups. Sexual trauma was described as the experiences of harassment, unwanted touching, sexual urges, and forced intercourse. This term was further classified into "ever experienced" and "never experienced" categories. Among the potential confounding factors, sexual education was defined as the process of acquiring skills and information related to human sexuality, such as body anatomy, forms of sexual harassment, and reproductive health, with categorization into "never" and "ever" groups. Access to pornographic content deals with watching, obtaining, or encountering explicit material triggering sexual desire, categorized as "never" and "ever." Relationship with family was the emotional, social, and psychological bond shared among parents and siblings, categorized as "disharmonious" and "harmonious." Parenting patterns were described as a form of care in which parents or caregivers provide respondents with "poor" and "good" categories from childhood to adulthood.

Collected data were analyzed univariately to describe the characteristics of respondents and then bivariately to determine the relationship between sexual trauma experiences and sexual orientation using the Chi-square test. To determine whether confounding factors influenced the relationship between these two variables, a multivariate analysis was conducted through multiple logistic regression tests. The entire tests were performed using IBM SPSS Statistics Base

ver. 22 (with license number 7b720dbc0888632240ca) and were all two-tailed with a p-value of <0.05, denoting statistical significance.

Results

A total of 216 MSM respondents aged 17-53 years, with an average of 30.44 years, were divided into homosexual and bisexual groups based on sexual orientation. The results showed 55.6% homosexual and 44.4% bisexual, while respondents exposed to sexual trauma were 41.7%, and those without the experiences were 58.3%. The characteristics presented in Table 1 signify that the majority (53.2%) have completed high school education, 38.4% work with private employees, and 67.1% are married.

According to Table 2, bivariable analysis using the Chi-square test found that sexual trauma experiences (p-value <0.0001), access to pornographic content (p-value <0.0001), parenting patterns (p-value <0.002), and relationship with family (p-value <0.04) were significantly correlated with sexual orientation. Multivariable analysis used a risk factor model comprising sexual trauma experiences as the main independent and sexual orientation as the dependent variable with controlled potential confounding factors. The results showed a significant relationship between sexual trauma experiences and sexual orientation in MSM with a p-value of 0.002, adjusted odds ratio (AOR) of 2.90, and 95% CI of 1.46-5.75. These results implied that MSM exposed to sexual trauma had a 2.90 greater risk of experiencing a different sexual orientation compared to MSM without sexual trauma after controlling access to pornographic content and parenting patterns (Table 3).

Table 1. Frequency Distribution of Respondent Characteristics (n = 216)

Variable	Frequency	Percentage
Age (years)		
Mean-median (Minimum-maximum)	30.44 – 28 (17-53)	
Sexual orientation		
Homosexual	120	55.6
Bisexual	96	44.4
Sexual trauma experience		
Ever experienced	90	41.7
Never experienced	126	58.3
Education level		
Elementary school	4	1.9
Junior high school	20	9.3
Senior high school	115	53.2
Higher education	77	35.6
Occupation		
Civil servant/state-owned enterprise	20	9.3
Private employee	83	38.4
Self-employed	60	27.8
Laborer	24	11.1
Student	29	13.4
Marital status		
Married	145	67.1
Single	71	32.9
Receiving sex education		
Never	103	47.7
Ever	113	52.3
Experience in accessing pornographic content		
Never	75	34.7
Ever	141	65.3
Peer influence		
Yes	145	67.1
No	71	32.9
Parenting patterns		
Poor	151	69.9
Good	65	30.1

Table 2. Relationship between Sexual Trauma Experiences and Sexual Orientation with Potential Confounding

Variable Group	Sexual Orientation				p-value	OR (95% CI)
	Homosexual		Bisexual			
	n	%	n	%		
Sexual trauma experiences						
Never	50	75.8	16	24.2	<0.0001	0.28 (0.14-0.54)
Ever	70	46.7	80	53.3		
Receiving sex education						
Never	64	62.1	39	37.9	0.08	1.67 (0.97-2.87)
Ever	56	49.6	57	50.2		
Experience in accessing pornographic content						
Never	57	76.0	18	24.0	<0.0001	0.26 (0.14-0.48)
Ever	63	44.7	78	55.3		
Parenting patterns						
Poor	73	48.3	78	51.7	0.002	0.36 (0.19-0.67)
Good	47	72.3	18	27.7		
Relationship with family						
Disharmonious	42	46.7	48	53.3	0.04	0.54 (0.31-0.93)
Harmonious	78	61.9	48	38.1		

Notes: OR = odds ratio, CI = confidence interval

Table 3. Final Logistic Regression Model with Risk Factor Model

Variable	Category	B	Sig.	OR (95% CI)
Sexual trauma experience	Ever	1.065	0.002	2.90 (1.46-5.75)
	Never	Reff		
Experience in accessing pornographic content	Ever	1.339	0.001	3.81 (1.98-7.33)
	Never	Reff		
Parenting patterns	Poor	0.957	0.005	2.60 (1.33-5.11)
	Good	Reff		

Notes: OR = odds ratio, CI = confidence interval

Discussion

The results showed that MSM sexual orientations included homosexual and bisexual, while the proportion of homosexual respondents was 57.1%. Furthermore, 42.3% were exposed to sexual trauma, where a significant relationship was found between sexual trauma experiences and sexual orientation with a p-value of 0.02, AOR of 2.71, and 95% CI of 1.173-6.260. These results signified that MSM exposed to sexual trauma were at risk of having a different sexual orientation compared to counterparts lacking the experiences after being controlled for sexual education, parenting patterns, and access to pornographic content.

Exposure to sexual trauma can make someone vulnerable to experiencing different sexual orientations, especially if they have a supportive community. The role of culture can be a positive resource contributing to the safety and well-being of a person experiencing sexual trauma.^{19,20} This study's results were consistent with a previous study stating that sexual trauma influences sexual orientation.²¹ Attitudes to sexual harassment have implications for interpersonal relationships, mental health, depression, subjective well-being, and sexual orientation.^{22,23} Abuse and victimization experienced by minorities in childhood puts them at risk of developing mental disorders, which can increase sexual disparities.²⁴ These include five dimensions of high-level traits: indifference, deceit, narcissistic privilege, sadism, and revenge.²¹

Being homosexual is not solely an innate characteristic but a complex aspect of individuality shaped by the interplay of genetic factors, uncontrollable environmental influences, past experiences, and individual choices.²⁵ The experience of interpersonal violence based on sexual identity varies from one individual to another, while sexual violence is experienced by both heterosexual and bisexual females.²⁵ The respondents had an average age of 30.44 years, but sexual abuse and trauma were experienced at an early age. Another study also reported the same results, that becoming gay was due to

sexual abuse experienced during childhood by close individuals, for example, uncles and female friends.⁸

Violence based on sexual orientation, gender identity, or gender expression occurs in society, and the campus environment.²⁶ Adverse experiences in childhood have a significant negative impact on subsequent behavior.^{27,28} Childhood sexual abuse is a risk factor for children experiencing depression, anxiety, and sexual behavior disorders. Sexual orientation disparities in children are strongly associated with differences in self-reported symptoms.²⁹ Dark triad traits on sexual attitudes and behaviors are consistently associated with mate selection efforts in males and females.³⁰ Both sexual behavior and interest terms are described as response choices made by women and men.³¹

The formation of sexual orientation among MSM was influenced by a confounding factor known as parenting patterns. The results showed a significant relationship between parenting patterns and sexual orientation in children, in which 74.4% had poor parenting patterns. These corresponded with Sterret *et al.*'s study stating that children experiencing good relationships and parenting patterns could have increased positive behavior.³² Improving the mother-child relationship and culturally sensitive psychological therapy can positively improve a child's identity development.³³ Poor parenting tends to support the non-heteronormative sexual orientation of children, and social cognitive theory states that individual personality is developed through imitation.³⁴ Sexual deviation is not innate but occurs due to the learning process and is also influenced by the family environment.³⁴

The learning process is more likely to be obtained at the home, in the workplace, and in the school environment. This study identified sex education as a confounding factor contributing to the formation of MSM sexual orientation. The results showed a significant relationship between sex education and sexual orientation, in which 54.5% of respondents had never received it. Sexual orientation needs optimal consideration when providing counseling services or educational interventions, specifically for the LGBT.³⁵ Comprehensive health education was capable of increasing knowledge of sexual health and changing behaviors.³⁶

Access to pornographic content serves as a sexual reference and initiates sexual arousal while watching porn can affect mental health in young males and is associated with risky sexual behavior.^{37,38} This has explicitly affected the attitudes and behavior exhibited among individuals in the MSM sexual minority group. Internet availability promotes access to pornographic content, including sexual discussions and sex-related dating. Additionally, it leads to receiving unwanted sexual requests or becoming victims of online-based harassment with the potential to influence sexual attitudes, knowledge, and behavior.^{39,40} This study has the potential to experience information bias since the interview contained several sensitive questions, resulting in respondents not answering honestly. To minimize the information bias, a personal approach was taken by explaining that all information provided was confidential, not disseminated, and only used to support this study.

Conclusion

From a socio-epidemiological perspective, this study identifies that sexual trauma experiences, access to pornographic content, and parenting patterns influence sexual orientation in the MSM. The sexual trauma experiences include harassment, unwanted touching, sexual urges, and forced sexual intercourse. Families and the government should consider these issues to effectively control negative impacts in the future.

Abbreviations

WHO: World Health Organization; LGBT: Lesbian, gay, bisexual, and transgender; MSM: Men who have sex with men; AOR: Adjusted odds ratio; OR: Odds ratio; CI: confidence interval.

Ethics Approval and Consent to Participate

This study received approval with number 197/UN9.FKM/TU.KKE/2024 from the Faculty of Public Health, Sriwijaya University.

Competing Interest

The authors declared no significant competing financial, professional, or personal interests that could affect the performance or presentation of the work described in this manuscript.

Availability of Data and Materials

All data and related materials from this study are available and can be provided by the first author.

Authors' Contribution

RJS contributed greatly to the conceptualization, methodology, data analysis, and writing aspects of this study. MI corrected the draft article, LN and RAS corrected the substance and discussion, and DDS handled the writing method and language adjustment. AM effectively corrected the English language and article substance, and RP conducted the data collection process and analysis.

Acknowledgment

The authors are grateful for the funding provided by DIPA of the Public Service Agency of Universitas Sriwijaya through contract number SP DIPA-023.17.2.677515/2024 on November 24, 2024, following Rector's Decree Number 0016/UN9/SK.LP2M.PT/2024, in June 2024. The authors are also grateful for the support offered by Yayasan Intan Maharani.

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