

Ivan Zečević<sup>1</sup>

UDK159.913-055.3(497.5)

Danijela Jandrić<sup>2</sup>

Research Article

<sup>1</sup>Neuropsychiatric Hospital dr. Ivan Barbot,  
Department of Acute Psychiatry<https://doi.org/10.46630/gpsi.19.2022.01><sup>2</sup>Zagreb, Croatia

## PSYCHOSOCIAL AND PSYCHIATRIC CHARACTERISTICS AMONG CROATIAN LESBIAN, GAY, AND BISEXUAL POPULATION

### Abstract

Since there is scarcity of psychological research on lesbian, gay, and bisexual persons (LGB) in Croatia, we aimed to collect first information about the prevalence of psychiatric disorders, psychosocial characteristics and factors related to those issues in LGB adults living there. We focused on bulimia nervosa, binge eating, alcohol abuse, major depressive disorder, other depressive syndromes, panic syndrome, and other anxiety syndromes and somatoform syndrome. Psychosocial information was also gathered and included details about abuse, being out, sexually risky behavior, employment, education, socio-economic status, relationships status and socio-demographic characteristics. According to research, 39% of LGB persons were unemployed and 52.2% were abused. Alcohol abuse is high among all subgroups. Women are prone to somatoform symptoms and alcohol abuse. Since there is insufficient research on the problems of Croatian LGB persons, our results show that there is a real need for regular screening for psychopathology in Croatian homosexual and bisexual persons and for preventive interventions.

*Keywords:* LGBT, mental health, prevalence, psychopathology, assessment, psychiatric disorders, psychosocial problems

### Introduction

#### Psychiatric Disorders in LGB Subgroups

There are significant differences between each of the lesbian, gay and bisexual (LGB) subgroups regarding psychiatric problems. Epidemiological studies in the LGB population are generally showing that they have a several times higher risk for developing various psychiatric problems (Bostwick et al., 2010; Cochran et al., 2003; Gilman et al., 2001). Results from the UK women health survey show that bisexual women (BW) have greater problems with psychosocial and psychiatric characteristics compared to lesbian women (LW; Colledge et al., 2015). Those include

<sup>1</sup> <https://orcid.org/0000-0002-7153-9199>, Corresponding author: [psihologzecevic@gmail.com](mailto:psihologzecevic@gmail.com)  
Please cite as: Zečević, I., & Jandrić, D. (2022). Psychosocial and psychiatric characteristics among Croatian lesbian, gay, and bisexual population. *Godišnjak za psihologiju*, 19, 9–32, <https://doi.org/10.46630/gpsi.19.2022.01>.

low socio-economic status, they are more likely to identify as trans, they have more problems with marijuana consumption, eating problems, self-harm, depression and anxiety. Authors believe that higher prevalence of those problems is contributed by double discrimination of homophobia and biphobia which are explained by minority stress (Meyer, 2007). Research shows that bisexuals have different minority stress factors that can contribute to their problems (Prell & Traeen, 2018).

Systemic review studies show us that bisexuals have higher prevalence of mood disorders and anxiety compared to lesbian, gay and heterosexual (King et al., 2008; Ross et al., 2017). One systemic study that compared heterosexual, homosexual and bisexual men and women shows interesting findings (King et al., 2008). Deliberate self-harm and suicidal attempts are more pronounced in gay men, then in bisexual ones, while there is cumulative incidence of suicide and suicidal ideation in lesbian women (LW) and bisexual women (BW). Psychoactive substance abuse disorder is more prevalent in LW and BW compared to heterosexual ones, but also compared to gay men (GM) and bisexual men (BM). Additionally, it looks like GM have stronger intention to die when they think about suicide, which is especially worrisome (Lee et al., 2017).

When we talk about other disorders, it looks like GM and BM have a higher risk for panic attacks and psychological distress, compared to heterosexual men (Cochran et al., 2003). LW and BW have more problems with generalized anxiety disorder compared to heterosexual ones. Also, BW and LW have more frequent tobacco and alcohol use than heterosexual ones (Burgard et al., 2005). There is a significant difference between homosexual and heterosexual men and women regarding drug abuse (Cochran et al., 2004). It looks like GM more often abuse marijuana, heroin, and cocaine, while LW abuse more marijuana and analgesics. One study suggests that LW have more problems with mental health, while BW have more problems with physical health when compared to heterosexual ones (Diamant & Wold, 2003). On the other hand, some other international studies failed to find any significant difference regarding psychiatric disorders between LGB subgroups (Bolton & Sareen, 2011; Jager & Davis-Kean, 2011; Kuyper, & Fokkema, 2011). Currently, there is no clinical or scientific research information to the author's knowledge regarding prevalence of psychiatric disorders and their differences in Croatian LGB population. Because of different mental health problems between each subgroup, it is recommended to investigate them separately (Warner et al., 2004). Regarding those results in our research study, we decided to treat bisexual and homosexual men and women as four separate categories.

### **Abuse and Maltreatment**

The prevalence of discrimination, violence, harassment, and homophobia due to sexual orientation is one of the biggest problems of the LGB community which can influence its psychiatric status (Pelullo et al., 2013). Studies that compare LGB subgroups are sparse and results regarding abuse are inconclusive. Sexual abuse (SA) against LGB persons can be categorized into various subtypes. It is estimated

that different types have different prevalence and that there are significant differences between men and women. One systematic review showed that childhood SA against GM and BM goes from 4.1–49.2% vs 14.9–76% for LW/BW; adulthood SA goes from 10.8–44.7% for GM/BM vs 11.3–53.2% for LW/BW; and hate crime related SA from 3–19.8% GM/BM vs 2–12.3% for LW/BW (Rothman et al., 2011). Results suggest that GM and BM face more hate-related sexual crime, while LW/BW experience more general sexual assaults. Comparing those subgroups, results show that GM have the highest risk for SA, followed by LW and then bisexuals (Blondeel et al., 2018). There are some conflicting results which show that BW and BM have higher chances of rape, physical violence or stalking by intimate partners (NISVIS, n.d.). It is suggested that SA at a young age can have a significant impact on the formation of sexual identity (Brady, 2006), and that SA is also prevalent in work settings (Brassel et al., 2019; Schuyler et al., 2020). Additionally, SA is connected with poorer mental health outcomes (Oram, 2019). There are no known research results regarding sexual violence in Croatian LGB population.

Physical violence (PV) caused by perceived sexual orientation is a common problem in this minority group. One systematic review showed that the most common form of PV is a physical assault followed by throwing objects and an assault without a weapon (Blondeel et al., 2018). Regarding PV, it looks like BM have greater chances of being discriminated against and experiencing PV (Hueber et al., 2004). In Croatia, 84% of LGB persons know someone from the LGB community who suffered from more than one case of physical violence because of their sexual identity, and about 50% of respondents were personally abused because of their sexual orientation (Jugović et al., 2006; Pikić & Jugović, 2006). Those who know survivors of assaults caused by their sexual orientation have a higher level of depression and anxiety. PV is a complex problem that can be related to various psychological and physical symptoms and problems (Friborg et al., 2015; Nicolaidis et al., 2004). Formerly, there are no known results about different experiences with PV regarding each subgroup in Croatia.

Emotional abuse (EA) is a specific form of maltreatment where a person is isolated, manipulated and degraded and where an abuser targets emotional wellbeing of their victim, and despite some similarities, it can be differentiated from verbal abuse, in which only verbal insults and slurs are used (Karakurt & Silver, 2013). Studies of LGB persons and EA are usually focused on intimate partner violence (e.g., Woodyatt, & Stephenson, 2016) or isolation of LGB youth in schools (e.g., Almeida et al., 2009; Huebner et al., 2016). To the author's knowledge, there are no studies that explored EA caused by sexual orientation and specific differences among LGB members in everyday experiences. Some results suggest that the Croatian LGB community could experience high levels of EA. Restrictive laws and institutional framework deny gay individuals their rights and they support discrimination of non-heterosexual parents on the individual level (Vučković Juroš, 2019). Students at different universities in Croatia usually do not support marriage equality or adoption for gay couples, even if they are their biological children (Huić et al., 2015). Some of the medical students in Croatia think homosexuality is an illness, and that they

would refuse to draw blood from a LGBT person if they could choose (Grabovac et al., 2014). These results show that students in Croatia do not receive appropriate knowledge about LGBT topics. There is a strong need for educational activities about the health and rights of LGBT persons, especially at the university level, for health and social care students, at the least. These factors combined can lead to greater exclusion of LGB people from everyday life.

As with earlier forms of violence and abuse, verbal abuse (VA) has also predictive value toward more problems with mental health, prostitution, academic performance, and running away from home (McCabe et al., 2010; Savin-Williams, 1994). VA is more prevalent in GM compared to women and bisexuals (Huebner et al., 2004; Thurlow, 2001). Additionally, they receive more aggressive homophobic pejoratives. As with SA and EA, there is no known information about the prevalence of VA among Croatian LGB population, and subgroup differences. Since all four types of maltreatment and abuse are connected to poorer mental health outcomes, it is important to explore them further in the Croatian national sample.

### **Sexual Behavior**

Risky sexual behavior can be defined as any behavior where a person has an increased risk for sexually transmitted infection (STI), including unprotected sexual intercourse, multiple sexual partners, sex with strangers, sex with intravenous drug users and the exclusion of preventative testing for STI (Chawla, & Sarkar, 2019; Derefinko et al., 2014; Woldeyohannes et al., 2017). Croatian studies show that there is inadequate medical knowledge about safe sex in LGB individuals. It is shown that 6.1% of gay men use condoms while giving oral sex, and 47.1% use condoms at each anal intercourse (Kolarić et al., 2008). This proves that homosexual men do not receive sufficient information about their healthcare risks, protection, and safer sex. Those results are further supported by Stulhofer et al. (2008).

### **Being Out of the Closet**

Concealment of sexual orientation is an important predictor of mental and physical health in LGB persons (D'Augelli et al., 1998; Huebner, & Davis, 2005; Rosario et al., 2009; Rosario et al., 2001; Russell et al., 2014). Disclosing sexual orientation, or in popular culture being "*out of the closet*" or "*outed*", is connected to verbal and physical abuse in school, family or at work, and generally having more problems with abuse. In contrast, one research did not provide any positive or negative effect of disclosing sexual orientation (Balsam & Mohr, 2007), while other studies have found some positive effects (Frale et al., 1998; Frost et al., 2007). Those areas usually include less risk for STI, better self-esteem and mood. Since Croatian parents in only 1 out of 5 coming out cases respond with positive reaction, it is possible that it could impact LGB mental health (Božić & Almesberger, 2007). Additionally, it looks like those persons who have disclosed their sexual orientation are deemed unemployable since 66% of business managers would not employ them because of it (Hendal Agency, 2005 as cited in Jugović et al., 2006). All those results

suggest that the *being out* status could have an important role in the lives of LGB members.

### **Study Objective and Hypotheses**

There is a lack of research results about the unemployment of Croatian LGB scene, their socio-economic status, education status, how and who they disclosed their sexual orientation to, who abused them and where, the prevalence of psychiatric disorders, sexual behaviors and other psychosocial characteristics. Because of it, the prevalence of psychiatric disorders and various psychosocial characteristics and problems among the Croatian LGB scene is worth exploring in depth. Based on earlier studies we hypothesize that:

1. Sexual, physical, emotional and verbal abuse is more prevalent in male homosexual population than in female homosexual or male and female bisexual population
2. There will be significant differences in the prevalence of various psychiatric disorders among LGB subgroups

## **Materials and Methods**

### **Participants**

Since online surveys are considered valuable and practical solutions for sampling, the well-known problems of gathering the LGB participants were solved using this sampling method (Goodman & Goodman, 2009; Meyer & Wilson, 2009).

The final sample consisted of 341 women and 400 men. In a statistical analysis, they were identified as four separate groups: bisexual men (13.8%), bisexual women (19.4%), gay men (40.2%) and lesbian women (26.6%). For detailed sample socio-demographic characteristics, see *Table 1*.

### **Materials and Procedure**

The study sample was collected on Croatian LGBT dating platforms *crol.hr* and *haer.app*. Only registered members of those sites were able to have access to our study. We were advertised by the administrators of those sites on their homepage. The standard informed consent form was not available since research was done online, but participants received information regarding the research, authors, its purpose, benefits and risks, anonymity and that answering the questions was based on their free will. If respondents had any questions or if they wanted some explanation regarding the study, they had the contact address of the first author.

We included the question “*Do you currently have any physical illness or condition?*” and based on that we decided to exclude all those respondents who answered positively to ensure that positive symptoms were not a consequence of physical illness (especially when we talk about somatoform, anxiety, or depressive symptoms) or that they were not intensified by a physical condition or disease.

**Patient Health Questionnaire (PHQ screeners, n.d.).** PHQ is a valuable and psychometrically reliable instrument for screening of psychiatric disorders in epidemiological studies. PHQ screeners are created based on criteria for different psychiatric diagnoses based on DSM-IV (PHQ manual, n.d.). PHQ screens for major depressive disorders, other depressive syndromes, somatoform disorders, panic attacks, other anxiety syndromes, bulimia nervosa, binge eating disorders, and alcohol abuse. There is a lack of psychometric information regarding the Croatian adaptation of PHQ but several works show that it can be used to differentiate between different patient population and to be used as a screening instrument in different medical settings (Lalić et al., 2018; Milić et al., 2019; Pibernik-Okanović et al., 2009; Školka, 2019; Vranješ et al., 2019). The answer format is variable and dependent on the psychopathological trait it focused on. For somatoform disorders, patients had to check how much their symptoms bothered them over the last 4 weeks (*not bothered, bothered a little, bothered a lot*). For depressive disorders, they had to check how often they were bothered by symptoms (*not at all, several days, more than half days, nearly every day*) during the last 2 weeks. Questions regarding panic attacks, bulimia nervosa, binge eating disorder, and alcohol abuse were answered depending on the present symptoms, and the answers were on the *Yes* and *No* principle. In other anxiety disorders, participants had to answer during the last 4 weeks whether they were bothered by symptoms (*not at all, several days, more than half days*). Scoring was done comparable to DSM-IV diagnosis criteria (e.g., for a major depression subscale patient had to answer “more than half days or nearly every day” on questions *2a* regarding depressive mood or *2b* regarding feeling pleasure, and at least 4 or more other symptoms from questions *2a-2i* like sleeping problems, tiredness, problems with appetite, feeling guilty, trouble concentrating, psychomotor slowness, and suicidal ideation). For more information about each scale look at the manual (PHQ manual, n.d.).

### ***Psychosocial Characteristics***

Information about psychosocial characteristics was collected with the help of a short survey which included questions about: LGB subgroup identification, gender, age, employment, socio-economic and educational status, being out status, participants who disclosed their sexual orientation and to whom they opened up about their sexuality, if they experienced specific type of abuse because of their sexual orientation and by whom/where, and their relationship status.

### ***Sexual Behavior***

In our study, we decided to focus on sexual behavior from several perspectives. We analyzed how many of the LGB members engage in sex with strangers, defined as hooking up at the bars while drunk, or intentionally meeting people online for the purpose of hooking up. Additionally, we explored how many of the respondents used condoms during intercourse with strangers, how well informed they were about STI, how often they got tested for STI and which type of relationship they preferred.



Information about sexual behavior was obtained from the particular survey questions (e.g., *Do you often hook up with strangers on dating sites or while drunk?*).

### Statistical Analysis

We used the Chi-square test to (i.e., lesbian women, bisexual women, gay men, bisexual men) examine relationships between bisexual men, bisexual women, gay men, lesbian women and abuse, disclosed orientation and risky sexual behavior. Only statistically significant Chi-squares are reported. Binary logistic regression analyses were used to estimate ratios for abuse type and abuse location, as well as risky sexual behavior according to group membership in the above mentioned LGB groups. In text, only statistically significant odd ratios are reported. Furthermore, binary logistic regression (with age and social-economic status as covariates) allowed prediction of different psychiatric syndromes according to group membership.

### Results

There were significant relationships between participant groups and age ( $\chi^2 = 48.42$ ;  $df = 12$ ;  $p = .000$ , Cramer's  $V = .148$ ), employment status ( $\chi^2 = 14.12$ ;  $df = 3$ ;  $p = .003$ ; Cramer's  $V = .138$ ), relationship status ( $\chi^2 = 16.76$ ;  $df = 3$ ;  $p = 0.001$ ; Cramer's  $V = .15$ ), outing ( $\chi^2 = 83.43$ ;  $df = 3$ ;  $p = .000$ ; Cramer's  $V = .336$ ) and being abused ( $\chi^2 = 10.78$ ;  $df = 3$ ;  $p = .013$ ; Cramer's  $V = .121$ ).

The vast majority (90.1%) disclosed their sexual orientation. However, there was a significant relationship between participant groups and outing ( $\chi^2 = 83.41$ ,  $df = 3$ ,  $p < .01$ ), with bisexual men having the least percentage (65.7%) of outings, while this percentage in other three groups was higher and ranged between 92.4% and 97.5%. While outing, 83.1% revealed their sexual orientation by themselves and in 6.3% of cases, their sexual orientation was revealed by others. Mostly, their friends (85.2%) knew their sexual orientation, followed by close family members (54%) and acquaintances (40.2%). A smaller percent of work colleagues (27.5%) and relatives (22.9%) knew their sexual orientation.

**Table 1**  
*Demographic and social-economic characteristics*

	Lesbian women (n = 197)		Gay men (n = 298)		Bisexual men (n = 102)		Bisexual women (n = 144)	
	n	%	n	%	n	%	n	%
<b>Age</b>								
18-20	42	21.3	77	25.8	48	47.1	55	38.2
21-30	107	54.3	131	44.0	35	34.3	66	45.8
31-40	36	18.3	49	16.4	10	9.8	18	12.5
41-50	11	5.6	27	9.1	6	5.9	5	3.5
50<	1	0.5	14	4.7	3	2.9	0	0.0
<b>Employed</b>								
Yes	120	60.9	166	55.7	57	55.9	59	41.0
No	77	39.1	132	44.3	45	44.1	85	59.0
<b>Education</b>								
8 years of formal education	2	1.0	10	3.4	4	3.9	6	4.2
12 years of formal education	115	58.4	165	55.4	72	70.6	80	55.6
College	75	38.1	111	37.2	23	22.5	56	38.9
Post-graduate	5	2.5	12	4.0	3	2.9	2	1.4
<b>SES</b>								
Very low	8	4.1	6	2.0	2	2.0	5	3.5
Low	16	8.1	37	12.4	10	9.8	12	8.3
Middle	139	70.6	204	68.5	65	63.7	104	72.2
High	30	15.2	49	16.4	24	23.5	21	14.6
Very high	4	2.0	2	0.7	1	1.0	2	1.4
<b>Came out</b>								
Yes	192	97.5	276	92.6	67	65.7	133	92.4
No	5	2.5	22	7.4	35	34.3	11	7.6
<b>In a Relationship</b>								
Yes	73	37.1	73	24.5	19	18.6	50	34.7
No	124	62.9	225	75.5	83	81.4	94	65.3
<b>Ever been abused</b>								
Yes	104	52.8	175	58.7	44	43.1	66	45.8
No	93	47.2	123	41.3	58	56.9	78	54.2



### **Abuse**

A high percentage of participants (52.5%) were abused sometimes during their life. Among gay men and gay women, prevalence rates for abuse were 58.7% and 52.8%, respectively. Bisexuals had slightly smaller prevalence for abuse, with 45.8% for bisexual women and 43.1% for bisexual men. Most often, participants were verbally (44.0%) and emotionally (32.0%) abused, 14.4% indicated physical abuse, while sexual abuse was the least often (6.1%). Gay men had 2.12 times (95% CI 1.34; 3.36) higher chance of being verbally abused than bisexual men and 2.23 times (95% CI 1.17; 4.24) higher chance of being physically abused than bisexual women. In total, 31.2% of all participants indicated being abused by their acquaintances while 28.2% indicated being abused by strangers, 12.4% by friends, and 10% by close family members. Compared to bisexual women, odds ratios for being abused by strangers for gay men and lesbian women were 2.22 (95% CI 1.36; 3.63) and 2.0 (95% CI 1.19; 3.38), respectively. Again, compared to bisexual women, the odds ratio for being abused by acquaintances for gay men was 2.04 (95% CI 1.3; 3.19). When asked for the location of abuse, 34.1% of all participants indicated being abused in school/college and 32.7% on the street. Percentages for abuse at home and work were 10.9 and 5.9, respectively. Compared to bisexual women, bisexual men had a 2.0 (95% CI 1.15; 3.5) higher probability of being abused at school/college, while gay men had a 2.5 (95% CI 1.6; 3.92) higher probability of being abused at the same place. Again, compared to bisexual women, gay men and lesbian women had a 1.82 (95% CI 1.17; 2.86) and a 1.73 (95% CI 1.07; 2.8) higher chances, respectively, of being abused on the street.

### **Sexual Behavior**

According to the survey results, 21% of all participants usually have sex with strangers, and 90% of those who do, use protection. Compared to lesbian women, gay men have 6.93 times (95% CI 3.76; 12.79) higher likelihood of having sex with strangers, while odds ratio for bisexual men is 6.18 (95% CI 3.06; 12.48). 77.5% of all participants indicate being well informed about sexually transmitted diseases (STDs), and 37.8% tested for STDs at least once a year, while others (62.2%) are not tested at all. There is a significant relationship between having sex with strangers and being tested for STDs ( $\chi^2 = 33.73$ ;  $df = 2$ ;  $p = .000$ ), with a greater percentage (57.1) of those who do have sex with strangers and are tested at least once a year. Compared to lesbian women, gay and bisexual men have a 4.56 (95% CI 3.04; 6.87) and a 1.87 (95% CI 1.10; 3.18) times higher likelihood of being tested for STDs, respectively, at least once a year; 5.8% of all participants prefer open relationships, 77.1% prefer closed relationships, while 17.1% do not mind their relationship status. A significantly higher percentage of those who usually have sex with strangers prefer open relationships (34.9) or do not care about the relationship type (33.1), compared to those who usually do not have sex with strangers (17.3;  $\chi^2 = 20.73$ ;  $df = 2$ ;  $p = .000$ ).

## Prevalence of Psychiatric Disorders

Significant correlations were found between some social-demographic variables and disorder prevalence. Socio-economic status correlated significantly with somatoform syndrome ( $r = -0.09$ ;  $p = 0.016$ ), major depressive syndrome ( $r = -0.24$ ,  $p = 0.000$ ), panic syndrome ( $r = -0.17$ ;  $p = 0.000$ ) and anxious syndromes other than panic ( $r = -0.09$ ;  $p = 0.014$ ), while age correlated with somatoform syndromes ( $r = -0.07$ ;  $p = 0.047$ ), other depressive syndromes ( $r = -0.11$ ;  $p = 0.002$ ) and alcoholism ( $r = -0.09$ ;  $p = 0.018$ ). Therefore, socio-economic status and age were included as covariates in the binary logistic regression model to estimate the risk for different mental health problems in participant groups. Gay men had the lowest or among the lowest prevalence rates in four out of eight syndromes and were chosen as a reference group to compare with other groups. Results are presented in Table 2.

**Table 2**  
*Prevalences for all participants and specific non-heterosexual participant groups*

	N	%	Wald	OR	[95% CI]	<i>p</i>
Somatoform syndrome						
Abused	60	15.4	30.33	13.91	[5.45, 35.51]	.000
Gay men <sup>a</sup>	10	3.4	22.93	1.00		
Bisexual men	8	7.8	4.87	3.02	[1.14, 8.42]	.027
Bisexual women	18	12.5	15.48	5.39	[2.33, 12.46]	.000
Lesbian women	29	14.7	20.74	5.91	[2.75, 12.70]	.000
Major Depressive syndrome						
Abused	106	27.2	25.24	2.99	[1.95, 4.58]	.000
Gay men <sup>a</sup>	52	17.4	9.27	1.00		
Bisexual men	18	17.6	0.31	1.20	[0.63, 2.26]	.580
Bisexual women	39	27.1	7.92	2.10	[1.25, 3.51]	.005
Lesbian women	34	17.3	0.00	1.01	[0.61, 1.67]	.967
Other depressive syndrome						
Abused	55	14.1	1.91	1.39	[0.87, 2.23]	.167
Gay men <sup>a</sup>	37	12.4	4.13	1.00		
Bisexual men	7	6.9	3.17	0.46	[0.20, 1.08]	.075
Bisexual women	17	11.8	0.30	0.84	[0.45, 1.57]	.582
Lesbian women	27	13.7	0.15	1.11	[0.65, 1.90]	.702
Panic						
Abused	83	21.3	18.23	2.73	[1.72, 4.33]	.000
Gay men <sup>a</sup>	39	13.1	6.21	1.00		
Bisexual men	12	11.8	0.00	1.02	[0.50, 2.10]	.949

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Bisexual women	29	20.1	5.40	1.94	[1.11, 3.40]	.020
Lesbian women	33	16.8	1.63	1.40	[0.83, 2.36]	.202
Anxious syndrome other than panic						
Abused	36	9.3	11.13	3.48	[1.67, 7.25]	.001
Gay men <sup>a</sup>	12	4.0	6.58	1.00		
Bisexual men	8	7.8	2.80	2.26	[0.87, 5.89]	.095
Bisexual women	14	9.7	6.13	2.84	[1.24, 6.50]	.013
Lesbian women	12	6.1	1.20	1.59	[0.69, 3.67]	.273
Bulimia nervosa						
Abused	17	4.4	0.81	1.47	[0.63, 3.42]	.368
Gay men <sup>a</sup>	14	4.7	2.01	1.00		
Bisexual men	3	2.9	0.48	0.63	[0.17, 2.30]	.486
Bisexual women	4	2.8	0.88	0.58	[0.18, 1.82]	.348
Lesbian women	5	2.5	1.49	0.52	[1.18, 1.48]	.223
Binge eating						
Abused	50	12.9	1.08	1.29	[0.80, 2.07]	.300
Gay men <sup>a</sup>	40	13.4	8.59	1.00		
Bisexual men	10	9.8	0.77	0.71	[0.34, 1.50]	.379
Bisexual women	22	15.3	0.24	1.15	[0.65, 2.06]	.622
Lesbian women	12	6.1	6.47	0.41	[0.21, 0.89]	.011
Alcoholism						
Abused	143	36.8	3.63	1.36	[0.99, 1.87]	.057
Gay men <sup>a</sup>	83	27.9	10.08	1.00		
Bisexual men	31	30.4	0.17	1.11	[0.67, 1.84]	.684
Bisexual women	56	38.9	4.73	1.61	[1.05, 2.48]	.030
Lesbian women	79	40.1	8.03	1.74	[1.19, 2.56]	.005
Any syndrome						
Abused	270	69.4	23.30	2.17	[1.58, 2.97]	.000
Gay men <sup>a</sup>	162	54.4	15.41	1.00		
Bisexual men	54	52.9	0.00	1.00	[0.62, 1.62]	.989
Bisexual women	101	70.1	10.12	2.06	[1.32, 3.21]	.001
Lesbian women	130	60.0	7.63	1.73	[1.17, 2.54]	.006

Note. OR – odds ratio;<sup>a</sup> comparison group

## Discussion

Since there is a lack of research studies and explanations of problems of Croatian LGB members, we could only compare some of their problems with similar international studies. Our study shows the real need to further explore and explain problems of the national LGB scene in Croatia. When we talk about employment, we see that 39% of LGB persons are not employed. As the general unemployment rate in Croatia is around 5-9%, and youth unemployment is around 23%, this is rather problematic (Unemployment General, n.d.; Unemployment Youth, 2019). We see that even when we take into consideration that the majority of our study sample was aged 20-30, or otherwise classified as a youth working force, we see that the unemployment rate is still too high compared to the general youth population. A possible explanation is in the fact that in Croatia there are no mechanisms to protect LGB workers in their work settings or to efficiently protect them from discrimination when applying for jobs, despite having a law that prohibits discrimination based on sexual orientation (LGBT job equality, 2017). What could further contribute to the LGB unemployment is negative attitudes of managers toward openness about sexual orientation (Hendal Agency, 2005 as cited in Jugović et al., 2006). It is important to note that discrimination, especially at the workplace, can lead to poorer mental health outcomes (Bostwick et al., 2014; Maulik, 2017).

Almost all of the LGB Croats in our sample disclosed their sexual orientation to at least one social group, most commonly their friends. That might be a consequence of having heightened awareness about the wider societal impact of how *being out* affects the position and social status of LGB individuals so these individuals prefer to *out* themselves only to people who are close to them, and they feel safe with. *Being out* is also a factor that could have affected high prevalence of psychiatric and psychosocial problems in our population study. It is shown that LGB individuals who are out are more likely to have a major depression and generalized anxiety disorder (Pachankis et al., 2015). It is believed that disclosing stigmatized identities, like those of LGB individuals, can lead to rejection and stress of having to find a new social network and new adaptations to the distress caused by the disclosure of sexual identity. Also, sex has a possible impact on the effect of disclosing sexual orientation. Beals et al. (2009) indicate that female disclosure of stigmatized identity can lead to better social functioning, which cannot be stated for men. We did not directly measure how being out affects the lives of LGB individuals. Almost all of our respondents were out and based on that fact we do not have results that support the thesis that women can prosper from disclosing their sexual orientation. In our study, women have more prevalence of somatoform syndrome, alcoholism, and panic syndrome compared to homosexual or bisexual men. It is important to consider the fact that bisexual men are least likely to be out. This can be related to the findings that bisexual men, when disclosing their identity, face increased discrimination: one from heterosexual peers and one from the homosexual ones (Friedman et al., 2014). So, it is possible that even within our sample, bisexual men fear discrimination that they could face from both sides.

Prevalence of maltreatment and different types of abuse is high in the Croatian LGB sample, but similar rates of widespread homophobic violence are reported in other countries, and it creates similar problems with the mental health of LGB individuals (Blondeel et al., 2018; Kussin-Shoptaw et al., 2017; Rothman et al., 2011; Weber & Gredig, 2018). Currently, Croatia does not have any plans to fight homophobia and mental health problems of LGB individuals at a national level. Gay men have a higher risk for verbal and physical abuse as compared to others, while gay and bisexual men receive a higher percentage of abuse in schools or colleges. Some earlier reports suggested that compared to women, homosexual and bisexual men suffered from more physical and sexual assaults which were related to hate crime (Hequembourg et al., 2015; Rothman et al., 2011). Our findings support those results. Since mostly homosexual men and women are abused, this could be a consequence of strangers or close people being able to recognize or guessing their sexual orientation more easily than that of bisexuals. Freeman et al. (2010) showed us that strangers can recognize and guess someone's homosexual orientation based only on their facial characteristics. The problem is that bisexual people were not included in this study so there are no firm results how good people are at recognizing bisexual faces. Consequently, gays and lesbians may be easier to spot in public or by family, and therefore, they become more vulnerable to discrimination and abuse.

Risky sexual behavior in the homosexual and bisexual male community is well documented and correlated to different factors like traditional morality, abuse, inhibition, substance use, stigma, knowledge of sexually transmitted diseases, and positive attitudes toward talking about sex with a partner (Hess et al., 2017; Stulhofer et al., 2009; Valencia et al., 2018). When disease density (like that of HIV/AIDS) is outside of an individuals' control, but widespread in some section of the community, the members of that community have a larger and more significant risk of acquiring sexually STI even when they do not engage in risky sexual behavior (Stevens et al., 2013). Even when members of the LGB community engage in typical sexual behavior, without adequate prevention and knowledge of STIs transmission, they have a higher risk of acquiring some sort of STI. Our sample is primarily composed of younger LGB members. It is worth noticing that in general Croatian population, there is well documented risky sexual behavior of younger adults that needs to be addressed with the help of education and different preventative interventions (Miskulin et al., 2009), and similar results are available for other countries (Hess et al., 2017; Valencia et al., 2018). Still, around 10% of those who engage in sex with strangers in our sample do not use condoms. It would be interesting to determine the reason and how we can prevent it. One possible explanation for not using condoms is that they are using pre-exposure prophylaxis (PrEP) treatment for prevention of HIV infection but that type of information was not included in our study so we do not have precise information regarding why condoms are not used. In international literature, it is well known that homosexual and heterosexual men are usually more prone to hookups or having sex with strangers that they met at bars, parties, or some other social event (Anderson, & Dahlberg, 1992; Grabovac et al., 2014). No matter what sexual orientation they may have, men should be more educated in relation to possible side-effects of such behaviors.

Results and data regarding prevalence of psychiatric disorders in different LGB populations from earlier studies are scarce and inconclusive with some suggesting there is no significant difference, while some show us that bisexual people are at more risk (Chaudry & Reisner, 2019; Fish, 2019; Pitman et al., 2021; Sandfort et al., 2014; Wittgens et al., 2022 etc.). It is worth noting that the majority of those studies usually only focuses on depression, anxiety, and substance abuse. Currently, there is a lack of information regarding somatoform disorders in the LGB population, but some research suggests that in adolescent years those symptoms can be the sign of gender dysphoria (Morabito et al., 2021). In our sample, LW and BW had a higher chance of having somatoform symptoms which is in line with earlier findings that women have a higher risk for developing somatic symptoms compared to men (Barsky et al., 2001). Prevalence of major depressive disorders, panic attacks, and anxiety disorders in our data suggest the highest prevalence for BW which is in line with earlier studies, except that in our study, BM had fewer panic attacks compared to GM (Bostwick et al., 2010; Chaudhry & Reisner, 2019). Regarding alcohol abuse, our results show that GW and BW are at the greatest risk for abuse, with other studies showing that BW and GM are more prone to it (e.g., Chaudhry et al., 2019) or that GM and GW are more prone to it (e.g., Pitman et al., 2021). Differences in these results are probably caused by some cultural and socio-psychological factors specific to Croatia since they play an important role in alcohol misuse and abuse (e.g., Sudhinaraset et al., 2016). In line with other results, in our sample, BW had the highest prevalence of binge eating disorder followed by GM, which is in line with other studies that show us how eating disorders are more prevalent in those two subgroups (e.g., Parker & Harbinger, 2020). On the other hand, we did not confirm that BM had greater chance for eating disorders, since in binge eating and bulimia more GM had problems with it than BM. Furthermore, LW has smallest percentages with eating problems which confirms previous results that LW are less likely to be included in unhealthy eating behaviors (e.g., Parker & Harbinger, 2020) compared to the other LGB subgroups. There is a lot of missing information regarding prevalence of psychiatric disorders among LGB individuals in different cultures, factors influencing it, but also risks and protective factors for it, but none of them could completely explain the differences in these results. The most popular hypothesis is that from the Minority Stress Model which predicts that bisexual male and female individuals have a higher chance for psychiatric disorders because of possible two-sided exposure to stressors through rejection and discriminatory policies from both heterosexual, and homosexual population. This can lead to more internalized homophobia and negative self-worth (Persson & Pfaus, 2015).

The high prevalence of abused LGB individuals leads to a greater chance of undergoing a diagnosis of psychiatric illnesses and psychological distress (Cochran et al., 2003; Russell & Fish, 2016). Consequently, abuse is one of the main risk factors for poor mental health outcomes for LGB individuals. Generally speaking, homosexual and bisexual persons have a 40% chance to receive diagnosis of mental disorder, while heterosexual peers have 17%. The prevalence of mental health disturbances in Croatia is similar as in earlier reports outside of Croatia (Cochran et



al., 2003; Kid et al., 2016; Semlyen et al., 2016). What is especially worrisome is the high prevalence of alcohol abuse among the Croatian LGB population where nearly 27–40% of the population has alcohol abuse problems. That amount of alcohol abuse can be due to prolonged stress and homophobic violence that LGB persons may encounter daily (Parent et al., 2019). Considering all this, it can be concluded that there is a real need for public education about LGB topics and professional activation of mental-health professionals in order to devise a plan to fight mental health issues in the LGB population in Croatia. Similar plans are already brought by different medical and psychological societies in the world (DeLeon, 1998). All of this is needed because the stigmatization of sexual minorities is present in Croatia, and it can harm their physical and mental health.

This study has several limitations. The main limitation is the approach to the collection of the sample. We carried out online research on LGB dating sites, and because of that, the majority of our participants' relationship status was described as single, considering that people in relationships usually do not use dating sites. We cannot firmly say that this sample is representative to the whole Croatian LGB community because, in reality, the majority is probably not on online dating sites. These results are the most generalizing to the Croatian LGB community who use Croatian gay dating sites as a way of meeting potential friends and partners. Additionally, we did not have a heterosexual control group which would be limited for information regarding bullying because of sexual orientation or coming out, but it would help with information about differences in prevalence of mental disorders.

The other problem is related to the gathering of information about psychiatric conditions. We used the earlier mentioned PHQ screeners. PHQ screeners are based on DSM-IV categories for mental illnesses, but they are not a diagnostic tool, but rather a prognostic one. PHQ screeners are intended for use in general practice by primary physicians so they can make decisions based on the results on PHQ screeners (determine if a psychological or psychiatric evaluation is necessary). So, being categorized in our sample as a 'major depressive disorder', or any other disorder from PHQ screeners doesn't mean that an individual has that, but rather that results are suggestive for that and now psychological/psychiatric evaluation is necessary. Also, PHQ screeners are an instrument for categorical use, which means that they provide information inside a category if there are abnormalities or not. However, PHQ doesn't show what the intensity of those abnormalities is. Quite likely, some people might not have all the necessary symptoms for the diagnosis of a 'major depressive disorder', but still have significant problems with the intensity of depressive symptoms. It would be recommended to use a combination of categorical and intensity measures of psychopathology.

Potential factors like personal lifestyle, coping strategies and personality were not measured in this study. We believe that these factors, along with socio-demographic characteristics, might have played an important role in such high prevalence of mental health disturbances among the Croatian LGB members who use LGB dating sites. Those measures should be included in future studies.



## Conclusion

Croatian LGB individuals who use online LGB dating sites have specific psychosocial characteristics and psychiatric disorders based on their category inside each subgroup membership. The majority of them are out, mostly to their friends, but it is most unlikely for them to be out to their work colleagues. When we talk about risky sexual behavior, both bisexual and homosexual men are more prone to it compared to homosexual or bisexual women. The most common disorder in women is somatoform, irrespective of abuse. Depressive and anxiety symptoms are highly prevalent and visible in LGB men and women, but bisexual women have a higher risk for them than gay men. Alcohol abuse is the most prevalent condition that deserves a more detailed and larger consideration and approach. There is a clear need for psychoeducation and preventive psychological treatments and plans to oppose abuse and discrimination of LGBT individuals living in Croatia, and to help them deal with their psychological distress and problems.

**Acknowledgment:** None.

**Declarations:**

**Funding:** None.

**Conflict of interests:** None.

Availability of data: Data is available at Mendeley Data with doi: 10.17632/8mry2t7drh.1

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**Ivan Zečević<sup>1</sup>**

**Danijela Jandrić<sup>2</sup>**

<sup>1</sup>*Neuropsihijatrijska bolnica dr. Ivan Barbot,*

*Odjel za akutnu psihijatriju*

<sup>2</sup>*Zagreb, Hrvatska*

## **PSIHOSOCIJALNE I PSIHIJATRIJSKE KARAKTERISTIKE HRVATSKE LEZBIJSKE, GAY I BISEKSUALNE POPULACIJE<sup>2</sup>**

### **Apstrakt**

S obzirom na nedostatak psiholoških istraživanja u Hrvatskoj na osobama koje su

<sup>2</sup> Adresa autora: [psihologzecevic@gmail.com](mailto:psihologzecevic@gmail.com)

Rad citirati na sledeći način: Zečević, I., & Jandrić D. (2022). Psychosocial and psychiatric characteristics among Croatian lesbian, gay, and bisexual population. *Godišnjak za psihologiju, 19*, 9-32, <https://doi.org/10.46630/gpsi.19.2022.01>.

lezbijke, gay ili biseksualne (LGB), cilj rada je da prikupi početne informacije o prevalenciji psihičkih poremećaja, psihosocijalnim karakteristikama i faktorima povezanim s problemima odraslih LGBT osoba. Fokus je bio na bulimiji nervosi, kompulzivnom prejedanju, zloupotrebi alkohola, velikom depresivnom poremećaju, drugim depresivnim smetnjama, paničnom napadu, drugim anksioznim smetnjama i somatofornom poremećaju. Psihosocijalne karakteristike uključivale su detalje o zlostavljanju, outanju, seksualno riskantnom ponašanju, zaposlenosti, obrazovanju, socio-ekonomskom statusu, statusu veze i socio-demografskim karakteristikama. 39% LGB osoba su nezaposlene, a 52.2% zlostavljano. Zloupotreba alkohola je podjednako visoka u svim podgrupama. Žene su sklonije razvoju somatofornih simptoma i zloupotrebe alkohola. S obzirom na nedostatak istraživanja LGBT osoba iz Hrvatske, naši rezultati pokazuju da postoji stvarna potreba za trijažom psihopatologije u hrvatskim homoseksualnim i biseksualnim osobama te preventivnim intervencijama.

*Ključne riječi:* LGBT, mentalno zdravlje, prevalencija, psihopatologija, procjena, psihijatrijske bolesti, psihosocijalni problemi

Primljeno: 6. 3. 2022.

Primljena korekcija: 10.08.2022.

Prihvaćeno za objavljivanje: 16.09.2022.