Research Square

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Paradoxical Linkage between Mental Health and Social Implications of COVID-19 crisis in Gay, Bisexual Men and transgenders in Eastern Europe and Central Asia: Results of Survey among the Hornet Mobile App Users

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Abstract

Background. Limited data exists on how COVID-19 restrictions have affected LGBT in the Eastern Europe and Central Asia (EECA) region.

Methods. It was conducted a cross-sectional survey in 2020, involving 5,037 Hornet users in EECA.

Results and discussion. A part of the sample belongs to vulnerable groups (lower social status, racial/ethnic minorities, etc). The economic circumstances of GBT were impacted: 21% lost at least 2/3 of income; 21% lost jobs; and 24% found themselves in extreme poverty. More vulnerable populations felt heavily struck (f. e. a food intake had been shortened among transgender people 41% vs 21% among cisgender ones).

Despite the limitation of physical freedom and economic losses, the level of depression and anxiety did not exceed the bounds of mild deviations (PHQ-4: 4.7, 95% CI: 4.6–4.8).

Conclusions. The data presented suggests the readiness of EECA GBT communities to face future crises.

Introduction

In 2020, COVID-19 became a huge challenge, leading to global restrictions on personal freedoms [1]. Since May 2020, COVID-19 started having impact on Eastern Europe and Central Asia (EECA)[1]. Countries of the region declared a state of emergency, shutting down schools, restaurants, and shops, suspending operation of the public transport, etc.

Although there was a range of publications on the consequences of the COVID-19 crisis in the region [2, 3], its impact on the well-being of vulnerable populations, such as gay and bisexual men, has been poorly studied [4–6].

Existing evidence shows lesbian, gay, bisexual, and transgender (LGBT) people are most vulnerable and disproportionately impacted by crises like COVID-19 or military conflicts [7, 8]. Data about LGBT people in the EECA region remains limited [9].

Mental health challenges. A comparison of cisgender heterosexual people with non-heterosexual and transgender individuals in the United States [10] demonstrated that during the COVID-19 LGBT people faced more mental health challenges, than cisgender heterosexual people. Compared to gays and lesbians, people with other non-heterosexual orientations had higher levels of depression, anxiety, and chronic stress; bisexual women and lesbians experienced more mental health issues compared to bisexual and gay men [11]. LGBT showed high levels of stress [12, 13]. Data from various countries show the same results [4, 6, 14–16].

Other factors also include homo- or transphobic attitudes of health workers in the context of COVID-19 crisis [17].

The COVID-19 aggravated existing issues, such as the psychological climate in couples [14, 18, 19], uncertainty about the future, discontinuation of HIV treatment [20, 21] and access to HIV services [4, 21, 22].

Economic challenges during COVID-19. The situation of LGBT people worsened [4, 21, 22]. The unequal effect of the COVID-19 related restrictions has been documented in the general population as well [23]. Vulnerability to COVID-19 was higher in the Brazilian population of bisexual and heterosexual people who have same-sex contacts compared to homosexual people, in cisgender men compared to cisgender women and in people over 50 years of age compared to younger people aged 18–29 [15]. Analysis of large-scale data from the United States showed that during the COVID-19 epidemic transgender people were much more economically vulnerable than lesbian, gay, bisexual, and heterosexual people [24].

Changes in sexual life during COVID-19. Some studies showed that number of partners increased during the COVID-19 [25–27], which could be seen as a strategy to cope with the lockdown-related stress [19]; while others, on the contrary, recorded a decrease in this indicator [13, 28].

Intersectional impact. Differences in the impact on mental health and economic well-being suggest intersectional and multidimensional linkages between the social and health-related implications of the pandemic and the LGBT agenda [15]. Thus, the examples of Great Britain and Brazil showed that marginalization of the LGBT communities led to their specific survival strategies [29], increased the risks of substance abuse or condomless sexual practices, while such maladaptive behaviours increased the chances of health deterioration among LGBT people compared to heterosexual people [30].

The COVID-19 had a more devastating impact on the LGBT youth than on the older people [21, 31] due to the aggravation of internalized homophobia and dysfunctional family relations.

The impact on HIV-positive LGBT people was also intersectional, as they faced higher levels of unemployment, income inequality, and intimate partner violence even before the epidemic. Social restrictions, such as being isolated and having less access to health care, had a negative effect on the life of people living with HIV [30, 32].

Even though COVID-19 related restrictions were harmful in many ways, they also contributed to some positive changes for the LGBT communities, such as internationalization of local movements, greater cohesion, and bigger sense of belonging to the community, at least in Japan [33] and Nigeria [20]. Some participants of a study in Canada [34] reported that lockdown restrictions reduced the pressure of traditional gender expectations due to reduction of face-to-face interactions.

Thus, the literature on the social implications of COVID-19 for the LGBT community is essentially limited to the Western World and South America, with the region of EECA almost not covered.

The EECA region is characterized by economic instability, military and political conflicts, and inequality in access to social services for men who have sex with men (MSM) [35], with high levels of external [36] and internal homophobia [37].

Our research aims to fill in the gaps in knowledge on the effect of COVID-19 on gay and bisexual men as well as transgender people (GBT) in the EECA region.

The main hypothesis is the unequal effect of government-enacted restrictions on the personal freedoms due to COVID-19 on the economic and mental well-being of more and less vulnerable groups of GBT in the EECA region.

Methods

A cross-sectional survey conducted among users of the Hornet mobile app from March to May 2020. Participants were asked to complete an online questionnaire about health and quality of life during the COVID-19 epidemic. Participants must be at least 18 years old, provide their informed consent, and were identified as male. The survey procedures were reviewed and approved by the Institutional Review Board of the Johns Hopkins School of Public Health (USA). More details on the methodology of the survey can be found elsewhere [38]. In the present study, we focus on the 5,037 participants from fourteen countries from the EECA region. The countries are assembled into three groups (Fig. 1) corresponding to geopolitical and cultural characteristics that emerged following the dissolution of the Soviet Union in 1991.

Participants were asked about the effect of the COVID-19 crisis on their economic status, mental health, and quality of life.

We performed an analysis of the bivariate distributions of sociodemographic factors, such as HIV status, being a member of a racial/ethnic minority, and immigrant status. We examined differences among the groups using Pearson's Chi square test (χ^2) and Cramèr's V test with a significance level of $\alpha < 0.05$ for categorical variables and comparison of the mean values for the PHQ-4 depression and anxiety scale. The calculations were performed in R [39].

Results

Sample characteristics

A total of 5,037 GBT participated to the survey in the EECA countries. The largest number were coming from the Russian Federation (76% or 3,847), and Ukraine (12% or 604). Participants per sexual and gender identity and per subregions are presented in Fig. 2. Eastern Europe accounts for 18%, Russia for 76%, and Central Asia and Caucasus for 6%.

Table 1 presents the characteristics per subregion. The average age was 31 (range 18–75 years old). Almost half (52%) defined their socio-economic status as upper middle or higher, and 44% believe that their income allows them to cover basic needs well or very well, while 49% reported that their total family income was not enough to get by. Two thirds (66%) had university education. Most identified as gay (74%), while the rest selected other options of transgender or non-binary identity. 12% stated that they belonged to a racial or ethnic minority, at least 1% live illegally (do not have a citizenship or residence permit) and about one tenth is immigrants of the first or second generation. Also, 11% indicated that they were living with HIV (90% were taking ARVs). Restrictions imposed due to COVID-19 affected 69% of respondents.

In terms of differences between subregions, there are more young adults from Eastern European countries compared to Russia and the Caucasus and Central Asia (31% vs. 26%); in the Caucasus and Central Asia compared to Eastern Europe and Russia, there are more bisexual men (32% vs. 21 and 18%, respectively), people from ethnic minorities (24% vs. 10 and 12%, respectively), and immigrants (18% vs. 12 and 10%, respectively), as well as those without a university degree (60% vs. 55 and 52%, respectively). GBTs from the Russian Federation and Central Asia experienced more restrictions due to COVID-19 than GBTs from Eastern Europe (73 and 83% vs. 69%, respectively).

Table 1
Socio-demographic characteristics of the sample, % (CCA — Caucasus and Central Asia, EE — Eastern Europe, RF — Russian Federation)

Variable	Whole sample, N = 5,037	EE, N = 888	RF, N = 3,847	CCA, N = 302
Age, years				
18–24 (young adults)	27	31	26	29
25–44 (adults)	64	58	66	64
45+ (senior adults)	9	11	9	7
Statistics for differences between subregions		$X^2(4) = 20.27$, $p < 0.001$, Cramèr's V = 0.045		
Gender identity				
Cisgender men	96	97	96	94
Trans or non-binary	4	3	4	6
Statistics for differences between subregions		$X^2(2) = 5.576$, $p = 0.060$, Cramèr's V = 0.034		
Sexual orientation				
Gay	74	74	75	59
Bisexual	19	21	18	32
Queer, pansexual, or other	7	5	7	8
Statistics for differences between subregions		$X^2(4) = 44.35$, $p < 0.001$, Cramèr's V = 0.066		
Education				
Less than 6 years	8	8	7	9
Between 6 and 12 years	13	10	13	16
Trade school or vocational training	13	15	12	15
Some university but no degree	19	21	19	21
University degree or more	47	45	48	39
Refuse to answer	< 1	< 1	< 1	1
Statistics for differences between subregions		$X^2(10) = 25.33$, $p = 0.005$, Cramèr's V = 0.050		
Citizenship or residence permit in country, where respondent lives				

Variable	Whole sample, N = 5,037	EE, N = 888	RF, N = 3,847	CCA, N = 302
Yes	86	87	86	83
No	1	1	1	2
Don’t know/Refuse to answer	13	12	13	16
Statistics for differences between subregions		$X^2(4) = 7.976$, $p = 0.092$, Cramèr’s V = 0.028		
Immigrant Status				
Parents are native	83	80	85	74
First-generation	4	5	2	9
Immigrant	7	7	8	9
Unsure/Refuse to answer	6	8	5	8
Statistics for differences between subregions		$X^2(6) = 56.78$, $p < 0.001$, Cramèr’s V = 0.075		
Racial/ethnic minority				
Yes	12	10	12	24
No	75	76	76	54
Don’t know/Refuse to answer	13	14	12	22
Statistics for differences between subregions		$X^2(4) = 79.22$, $p < 0.001$, Cramèr’s V = 0.089		
Socioeconomic status				
Lower	7	7	6	7
Lower middle	41	39	42	35
Upper middle or upper	52	54	51	57
Refuse to answer	< 1	< 1	< 1	1
Statistics for differences between subregions		$X^2(6) = 10.22$, $p = 0.116$, Cramèr’s V = 0.032		
How well can you cover your basic needs (e.g., food, clothing, housing, transport, education, health care) with your current income?				
Fairly or very well	44	46	44	42
Not at all to somewhat	49	48	49	50

Variable	Whole sample, N = 5,037	EE, N = 888	RF, N = 3,847	CCA, N = 302
Refuse to answer	6	6	6	8
Statistics for differences between subregions		$X^2(4) = 3.627$, p = 0.459, Cramèr's V = 0.019		
If we take the overall monthly income of your family, how easy is it for your family to get by?				
Easily	39	39	39	38
Don't know, can't or don't want to answer	13	12	12	17
With difficulty	49	49	49	45
Statistics for differences between subregions		$X^2(4) = 5.629$, p = 0.229, Cramèr's V = 0.024		
Government restricted the movement				
I am completely restricted or quarantined, and I cannot leave my house or quarantine location	7	6	7	18
I am somewhat restricted or advised to leave my house only for essentials	62	43	66	66
There are no restrictions on my movement	31	51	27	15
Refuse to answer	< 1	0	0	2
Statistics for differences between subregions		$X^2(6) = 306.8$, p < 0.001, Cramèr's V = 0.175		
HIV status				
HIV negative	72	72	73	70
HIV positive	11	9	12	9
Don't know/Refuse to answer	16	19	15	21
Statistics for differences between subregions		$X^2(4) = 15.80$, p = 0.003, Cramèr's V = 0.039		

From 1 to 12% were members of especially vulnerable populations, as in addition to the LGBT stigma they had at least one other vulnerability: older adults, trans and non-binary persons, racial/ethnic minorities, immigrants, people with lower socioeconomic status or low level of education, without citizenship or residence permit, HIV+. That is why, we will focus on comparing the effect of anti-epidemic measures on the economic well-being and health of people from these subgroups with the impact on others.

Economic impact

COVID-19 crisis had a significant impact on the economic well-being of GBT in the EECA region (Table 2). Thus, 21% lost their jobs due to the COVID-19 crisis; 61% partly lost their income; 24% had to limit food intake.

In the Caucasus and Central Asia compared to Eastern Europe and the Russian Federation, a greater percentage of GBTs lost two-thirds of their income (27% vs. 19 and 21%, respectively) and had to reduce meal size (24% vs. 19 and 19%, respectively).

Table 2
Implications of the COVID-19 crisis in terms of changes in the personal economic status, % (CCA — Caucasus and Central Asia, EE — Eastern Europe, RF — Russian Federation)

Variable	Whole sample, N = 5,037	EE, N = 888	RF, N = 3,847	CCA, N = 302
Lost job due to COVID-19				
Yes	21	20	22	21
No	30	29	30	24
Refuse to answer or Not applicable (I don't have a job, I already lost it, I'm retired, I'm a student etc.)	49	51	48	55
Statistics for differences between subregions		$X^2(4) = 8.476$, p = 0.076, Cramèr's V = 0.029		
Anticipated income reduction due to COVID-19				
0%	29	29	29	30
1–29%	21	24	21	13
30–59%	19	18	19	20
60–100%	21	19	21	27
Refuse to answer	9	9	9	10
Statistics for differences between subregions		$X^2(8) = 20.78$, p = 0.008, Cramèr's V = 0.045		
Cutting meals or reducing meal size due to COVID-19				
Yes	19	18	19	24
No	67	67	68	61
Don't know/Refuse to answer	14	15	13	15
Statistics for differences between subregions		$X^2(6) = 12.80$, p = 0.046, Cramèr's V = 0.036		

As shown in Table 3, changes in the economic status were mostly associated with respondents' education: the highest share of those who lost their jobs were among people without university degree; socioeconomic status before the crisis: four third of respondents with low socioeconomic status lost their job due to COVID-19, and two thirds reported cutting meal; and movement restrictions: 49% of those whose movement was completely restricted lost their jobs, and 30% had to cut their meal. Access

to food was also associated with age, gender identity, sexual orientation, as well as belonging to ethnic/racial minority.

Table 3
Linkage of changes in the economic status due to COVID-19 crisis with the key sociodemographic indicators, % (missings excluded)

	Lost job	Anticipated income reduction from 60 to 100%	Cutting meals or reducing meal size
Age, years			
18–24	44 (N = 530)	12 (N = 1,352)	25 (N = 1,100)
25–44	42 (N = 1,786)	8 (N = 3,228)	22 (N = 2,859)
45+	40 (N = 253)	5 (N = 457)	18 (N = 412)
Statistics for differences between subgroups	$X^2(2) = 1.316$, $p = 0.518$, Cramèr's V = 0.023	$X^2(2) = 33.67$, $p < 0.001$, Cramèr's V = 0.082	$X^2(2) = 6.930$, $p = 0.031$, Cramèr's V = 0.040
Gender identity			
Cis	41 (N = 2,400)	8 (N = 4,687)	21 (N = 4,091)
Trans or non-binary	56 (N = 89)	14 (N = 181)	41 (N = 148)
Statistics for differences between subgroups	$X^2(1) = 7.395$, $p = 0.007$, Cramèr's V = 0.057	$X^2(1) = 6.974$, $p = 0.008$, Cramèr's V = 0.040	$X^2(1) = 30.07$, $p < 0.001$, Cramèr's V = 0.086
Sexual orientation			
Gay	42 (N = 1,906)	8 (N = 3,730)	22 (N = 3,279)
Bisexual	40 (N = 513)	11 (N = 978)	24 (N = 817)
Queer, pansexual, or other	48 (N = 150)	13 (N = 329)	30 (N = 275)
Statistics for differences between subgroups	$X^2(2) = 3.110$, $p = 0.211$, Cramèr's V = 0.035	$X^2(2) = 16.20$, $p = 0.003$, Cramèr's V = 0.057	$X^2(2) = 10.58$, $p = 0.005$, Cramèr's V = 0.049
Belonging to a racial/ethnic minority			
Yes	53 (N = 325)	8 (N = 604)	32 (N = 526)
No	39 (N = 1,961)	8 (N = 3,774)	19 (N = 3,331)
Don't know/Refuse to answer	54 (N = 283)	15 (N = 659)	34 (N = 514)
Statistics for differences between subgroups	$X^2(2) = 43.66$, $p < 0.001$, Cramèr's V = 0.130	$X^2(2) = 30.93$, $p < 0.001$, Cramèr's V = 0.078	$X^2(2) = 86.26$, $p < 0.001$, Cramèr's V = 0.140
Education			
Less than 6 years	52 (N = 186)	23 (N = 332)	32 (N = 316)

	Lost job	Anticipated income reduction from 60 to 100%	Cutting meals or reducing meal size
Age, years			
Between 6 and 12 years	41 (N = 296)	25 (N = 577)	28 (N = 540)
Trade school or vocational training	50 (N = 321)	30 (N = 574)	35 (N = 549)
Some university but no degree	53 (N = 446)	29 (N = 888)	25 (N = 847)
University degree or more	36 (N = 1,315)	20 (N = 2,206)	16 (N = 2,107)
Statistics for differences between subgroups	$X^2(4) = 59.54$, $p < 0.001$, Cramèr's V = 0.152	$X^2(4) = 45.82$, $p < 0.001$, Cramèr's V = 0.100	$X^2(4) = 133.4$, $p < 0.001$, Cramèr's V = 0.175
Immigrant status			
Parents are native	41 (N = 2,148)	8 (N = 4,189)	21 (N = 3,671)
First generation	48 (N = 88)	9 (N = 180)	32 (N = 161)
Immigrant	51 (N = 181)	12 (N = 377)	30 (N = 313)
Statistics for differences between subgroups	$X^2(2) = 9.462$, $p = 0.009$, Cramèr's V = 0.063	$X^2(2) = 5.529$, $p = 0.063$, Cramèr's V = 0.034	$X^2(2) = 23.62$, $p < 0.001$, Cramèr's V = 0.075
Socioeconomic status			
Lower	72 (N = 147)	9 (N = 332)	63 (N = 286)
Lower middle	55 (N = 989)	8 (N = 2,074)	28 (N = 1,792)
Upper middle or Upper	30 (N = 1,427)	10 (N = 2,619)	13 (N = 2,283)
Statistics for differences between subgroups	$X^2(2) = 239.1$, $p < 0.001$, Cramèr's V = 0.305	$X^2(2) = 2.285$, $p = 0.319$, Cramèr's V = 0.021	$X^2(2) = 430.4$, $p < 0.001$, Cramèr's V = 0.314
HIV status			
HIV negative	41 (N = 1,883)	9 (N = 3,649)	21 (N = 3,176)
HIV positive	46 (N = 300)	7 (N = 563)	25 (N = 502)
Don't know/Refuse to answer	44 (N = 386)	11 (N = 825)	25 (N = 693)
Statistics for differences between subgroups	$X^2(2) = 3.085$, $p = 0.214$, Cramèr's V = 0.035	$X^2(2) = 7.876$, $p = 0.019$, Cramèr's V = 0.040	$X^2(2) = 6.712$, $p = 0.034$, Cramèr's V = 0,039
Government restricted the movement			

	Lost job	Anticipated income reduction from 60 to 100%	Cutting meals or reducing meal size
Age, years			
I am completely restricted or quarantined, and I cannot leave my house or quarantine location	49 (N = 113)	14 (N = 237)	30 (N = 188)
I am somewhat restricted or advised to leave my house only for essentials	43 (N = 1,985)	9 (N = 3,910)	22 (N = 3,417)
There are no restrictions on my movement	36 (N = 466)	9 (N = 883)	23 (N = 761)
Statistics for differences between subgroups	$X^2(2) = 9.125$, p = 0.010, Cramèr's V = 0.060	$X^2(2) = 12.31$, p = 0.006, Cramèr's V = 0.049	$X^2(2) = 6.263$, p = 0.043, Cramèr's V = 0.038

Impact on mental well-being

As for the mental health situation, 33% reported that they felt depressed most of the time over the last two weeks, 35% had a feeling of anxiety, 30% reported little interest and 24% could not control worrying. These four items form the PHQ-4 mental health scale [40], with the higher score indicating more frequent manifestation of symptoms. The mean score 4.7 (95% CI: 4.6–4.8) shows that the respondents have mild symptoms of depression and anxiety disorders.

Table 4 demonstrates differences in the severity of symptoms among different groups. Since most respondents were from Russia (76%), it was among them that the main inequalities in the severity of symptoms emerged. Thus, during the first wave of COVID-19, people from Caucasus and Central Asia compared to other subregions' countries, young GBT people were more affected compared to people 25+, transgender people, those who identify themselves as other than gay or bisexual, immigrants or their children compared to native-born residents, and GBT people from racial or ethnic minorities, GBTs of low social status and with insufficient income, as well as those who lost their jobs during the epidemic, lost more than two third of their income, or were forced to limit their diet. Restrictions affected the severity of depressive symptoms only in Eastern Europe. The severity of depression and anxiety only in the case of transgender people from Russia, people with a very low social status who lost their jobs and two third of their income and were forced to limit food, was within the boundaries of moderate disorders, while for everyone else it did not go beyond mild range.

Table 4

Average PHQ-4 scores and 95% CI in different sub-groups (missings excluded, CCA — Caucasus and Central Asia, EE — Eastern Europe, RF — Russian Federation). Scores are rated as normal (0–2), mild (3–5), moderate (6–8), and severe (9–12) depression and anxiety

Variable	EE	RF	CCA
Age, years			
18–24	5.4 [4.9–5.9]	5.5 [5.3–5.7]	5.7 [4.8–6.5]
25–44	4.7 [4.3–5.0]	4.5 [4.4–4.6]	5.3 [4.7–5.9]
45+	3.8 [3.1–4.6]	4.0 [3.6–4.4]	4.0 [1.8–6.2]
Gender identity			
Cisgender men	4.7 [4.5–5.0]	4.6 [4.5–4.7]	5.4 [4.9–5.9]
Trans or non-binary	5.3 [3.5–7.1]	6.0 [5.3–6.7]	5.5 [3.3–7.7]
Sexual orientation			
Gay	4.9 [4.6–5.2]	4.7 [4.6–4.8]	5.5 [4.9–6.1]
Bisexual	4.3 [3.7–4.8]	4.1 [3.9–4.4]	4.9 [4.0–5.8]
Queer, pansexual, or other	5.5 [4.3–6.7]	5.3 [4.8–5.8]	6.2 [4.5–7.9]
Education			
Less than 6 years	5.7 [4.6–6.7]	5.2 [4.7–5.7]	5.8 [4.1–7.5]
Between 6 and 12 years	5.1 [4.3–6.0]	4.8 [4.4–5.1]	5.8 [4.4–7.3]
Trade school or vocational training	5.5 [4.8–6.1]	5.0 [4.6–5.3]	4.9 [3.9–6.0]
Some university but no degree	4.5 [4.0–5.0]	5.2 [4.9–5.5]	5.7 [4.7–6.8]
University degree or more	4.5 [4.1–4.9]	4.3 [4.1–4.5]	5.0 [4.2–5.8]
Citizenship or residence permit in country, where respondent lives			
Yes	4.8 [4.5–5.1]	4.6 [4.5–4.8]	5.4 [4.9–5.9]

Variable	EE	RF	CCA
No	5.7 [0.3–11]	5.4 [3.5–7.2]	3.4 [0–7.7]
Immigrant Status			
Parents are native	4.7 [4.5–5.0]	4.6 [4.4–4.7]	5.1 [4.6–5.7]
First-generation	4.4 [3.3–5.6]	5.5 [4.7–6.3]	6.3 [4.6–8.1]
Immigrant	5.0 [3.9–6.1]	5.3 [4.7–5.8]	5.5 [3.5–7.4]
Racial/ethnic minority			
Yes	4.9 [4.0–5.7]	5.5 [5.1–5.8]	5.7 [4.7–6.7]
No	4.7 [4.4–4.9]	4.5 [4.4–4.6]	5.3 [4.6–5.9]
Socioeconomic status			
Lower	6.7 [5.8–7.6]	7.0 [6.5–7.5]	7.4 [4.9–9.9]
Lower middle	4.9 [4.5–5.3]	5.2 [5.0–5.4]	5.8 [5.1–6.6]
Upper middle or upper	4.4 [4.1–4.7]	3.9 [3.8–4.1]	4.8 [4.2–5.4]
How well can you cover your basic needs (e.g., food, clothing, housing, transport, education, health care) with your current income?			
Fairly or very well	4.1 [3.8–4.5]	3.6 [3.4–3.7]	4.1 [3.5–4.7]
Not at all to somewhat	5.5 [5.1–5.8]	5.6 [5.5–5.8]	6.4 [5.7–7.1]
If we take the overall monthly income of your family, how easy is it for your family to get by?			
Easily	4.0 [3.7–4.4]	3.5 [3.4–3.7]	4.1 [3.4–4.7]
With difficulty	5.4 [5.0–5.7]	5.6 [5.4–5.8]	6.4 [5.7–7.1]
Government restricted the movement			
I am completely restricted or quarantined, and I cannot leave my house or quarantine location	6.4 [4.6–8.2]	5.4 [4.7–6.1]	4.2 [2.8–5.6]

Variable	EE	RF	CCA
I am somewhat restricted or advised to leave my house only for essentials	4.9 [4.7–5.2]	4.7 [4.6–4.8]	5.6 [5.1–6.2]
There are no restrictions on my movement	4.0 [3.5–4.5]	4.4 [4.1–4.7]	4.6 [3.3–5.9]
HIV status			
HIV negative	4.9 [4.6–5.2]	4.6 [4.5–4.7]	5.3 [4.7–5.9]
HIV positive	4.2 [3.5–4.8]	4.5 [4.1–4.9]	5.3 [3.3–7.2]
Lost job			
Yes	6.2 [5.6–6.7]	6.0 [5.7–6.2]	7.2 [6.1–8.2]
No	3.8 [3.4–4.2]	3.4 [3.2–3.6]	4.3 [3.3–5.2]
Anticipated income reduction from 60 to 100%			
Yes	5.8 [5.2–6.4]	6.1 [5.9–6.3]	6.5 [5.6–7.5]
No	4.5 [4.2–4.8]	4.2 [4.1–4.4]	4.9 [4.3–5.4]
Cutting meals or reducing meal size			
Yes	6.9 [6.4–7.5]	7.0 [6.8–7.3]	7.5 [6.6–8.3]
No	4.2 [3.9–4.5]	4.0 [3.8–4.2]	4.4 [3.8–4.9]

Discussion

Our purpose was to demonstrate the effect of the COVID-19 crisis on the economic well-being and mental health of GBT in EECA. We assumed that this impact would be different for groups with different social vulnerabilities.

Survey participants were affected by the restrictions introduced due to COVID-19. COVID-19 related measures resulted in worsening economic situation, which led to a reduction in income (in 40% of cases by more than a third). A fifth part stated that it restricted their opportunities to have meals, which aligns with the share of economically vulnerable respondents. The most affected were GBTs from the Caucasus and Central Asia.

We showed strong linkages between the belonging to especially vulnerable subgroups with the negative implications of COVID-19 related measures. Thus, young adults and people who did not identify as gay often saw their income decrease by more than two-thirds and were forced to reduce meal size; trans and nonbinary people, racial or ethnic minorities, people with a primary education, immigrants, and those who described their social status as low were more likely to lose jobs, income and access to food. The relationship between HIV status and economic losses was more complex: HIV-positive, HIV-negative, and those who did not know their status lost their jobs equally often; incomes decreased somewhat more often among people who did not know their status; and food was forced to be restricted more often by HIV-positive people or people without HIV status.

In terms of the severity of depression and anxiety symptoms, it should be noted that the impact of the epidemic was rather weak, since the PHQ-4 scale values did not go beyond mild disorders. The severity of mental health disorders varied both in subregions (the most affected were GBTs from the Caucasus and Central Asia) and in groups differing in social vulnerability. Economic vulnerability seemed to be associated with mental health problems in all subregions, but gender identity and sexual orientation were associated with the severity of symptoms only among respondents from Russia. Thus, it seems reasonable to assume that economic losses could have been the main reason for the deterioration of mental health during the first wave of the epidemic.

Data from other countries indicate that the COVID-19 epidemic increased the prevalence of suicidal ideations and attempts among men[41] and aggravated mental health situation in the general population [31]. As opposed to other regions, in EECA, depression and anxiety levels among GBT during the COVID-19 crisis were not high. These paradoxical results showing that despite the restrictions and economic losses, depression and anxiety levels did not exceed the bounds of mild deviations from the norm, are aligned with another face-to-face study among MSM conducted in Ukraine in 2021 [42], which demonstrated that during the spread of the Omicron variant of COVID-19, depression and anxiety levels were within the normal range.

The linkage between younger age and higher depression and anxiety levels may be associated with higher average indicators of internalized homonegativity among younger subgroups of gay and bisexual men (as shown for the Russian Federation in [37]).

The nature of linkages between socio-economic vulnerabilities of GBT during the first wave of the COVID-19 (with the factors mostly non-specific for LGBT people associated with the changes in economic status and moderate symptoms of mental health disorders, see Table 3 and Table 4) may indicate that belonging to gay and bisexual (and partly trans) community can be a factor of social vulnerability, but, unlike in other regions of the world, it is not a determinant in this regard. Unfortunately, we do not have data that would allow us to compare other groups described in the publications, such as hetero- and non-heterosexual people, men, and women, etc. One possible explanation could be a higher pre-crisis level of chronic stress due to internalized homo- or transphobia [37]. In this regard higher LGBT resilience could be viewed as a tolerance to stress.

Considering further research, we would propose that LGBT, who have more access to social support, could demonstrate not only more resilience in crises, but also less impact on their mental health after a crisis.

Limitations of the data presented are primarily associated with the pilot nature of the study. Potential inaccuracies may occur due to the following factors: (1) the data analysed were obtained in a cross-sectional survey, which cannot provide information on the causal connection between the epidemic and the observed changes. When we talk about the “effect,” in fact we mean the respondents’ subjective perception that the changes observed by them were actually caused by the restrictions at the time of the rapid spread of COVID-19; (2) the survey only covered the Hornet mobile app users, but despite the existence of a global user community, it cannot be representative of the entire community of gay and bisexual men, as people in different countries and groups have uneven access to mobile connection and Internet; (4) when participating in the survey, respondents could choose their preferred language (English, Spanish, Russian, French or Turkish). It was assumed that people from EECA countries know either Russian or English, which limited the participation of people from countries, where the knowledge of these languages is not widespread.

Conclusions

Data on the effect of the social restrictions imposed in response to the COVID-19 on LGBT people are limited, especially in the region of Eastern Europe and Central Asia.

A cross-sectional online survey of a non-random sample of 5,037 Hornet mobile app GBT users, who reside in the EECA countries, was conducted in March–May 2020. It demonstrated that COVID-19 crisis worsened the economic situation of the GBT. However, the data on mental health changes are paradoxical and differ from similar data from other regions of the world. Despite the restrictions on physical freedom and economic losses, the levels of depression and anxiety in EECA did not exceed the bounds of mild deviations from the norm. Social changes caused by the COVID-19 crisis had more severe consequences for the more vulnerable people, such as trans and non-binary people, members of racial or ethnic minorities, people with low educational level or low socioeconomic status, and young people.

The results demonstrate the intersectional effects of restrictions on the physical, social, and mental well-being of GBT. The negative implications of the COVID-19 crisis affected the entire population in the EECA region, but more economically vulnerable subgroups have suffered the most.

Declarations

Author Contributions Statement

MK, SS, and EL — analysis and interpretation of the data, and the drafting of the paper; SH, AG, and SB — the conception and design of the survey, revising it critically for intellectual content; MK, SS, SH, AG, SB,

and EL — the final approval of the version to be published. All authors agree to be accountable for all aspects of the work.

Ethics Statement: The survey procedures were reviewed and approved by the Institutional Review Board of the Johns Hopkins School of Public Health (USA)

Disclosure statement: the authors report there are no competing interests to declare

Data availability statement: the data associated with a paper cannot be made open without the permission of HORNET LTD and LGBT Foundation

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Footnotes

1. Countries of the EECA region: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

Figures



Figure 1

Participating countries, per subregion: Central Asia and Caucasus in blue, Eastern Europe in red, Russian Federation in brown

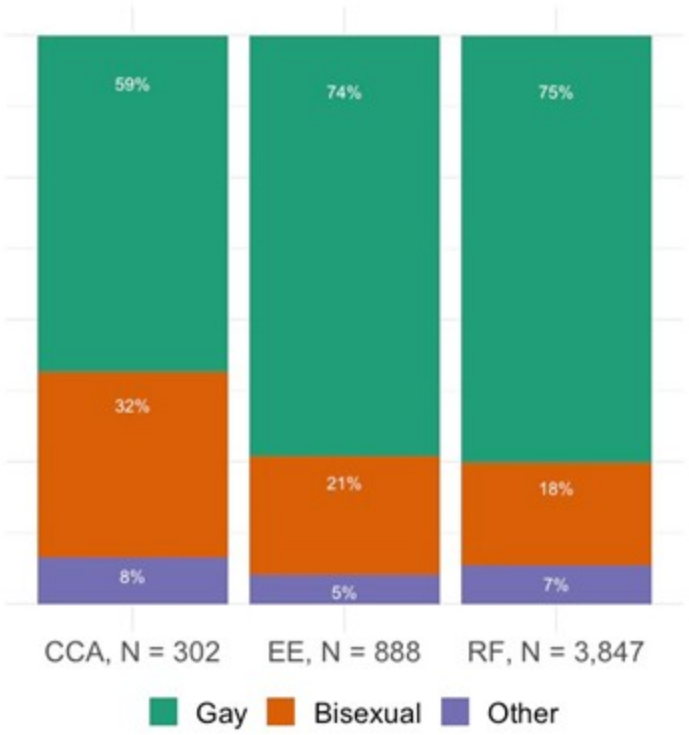


Figure 2

Distribution of survey respondents by subregions and SOGI, $X^2(4) = 44.35$, $p < 0.001$, Cramèr's V = 0.066.

CCA — Caucasus and Central Asia, EE — Eastern Europe, RF — Russian Federation