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The impact of COVID-19 on the LGBTQ+ community: Comparisons between cisgender, heterosexual people, cisgender sexual minority people, and gender minority people

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ABSTRACT

There is a dearth of public health data and research focusing on lesbian, gay, bisexual, transgender, queer, and other sexual and gender minority (LGBTQ+) populations during the coronavirus ("COVID") pandemic. This study evaluated how COVID has impacted health, social, and occupational areas of functioning of the LGBTQ+ community. A community survey was distributed via email by local LGBTQ+ community organizations between September and December 2020. Participants (cisgender, heterosexual people, $n = 63$; cisgender sexual minority people, $n = 184$; and gender minority people, $n = 74$) were asked how COVID has impacted their life circumstances (i.e., physical health, mental health, financial stability, meeting basic needs, and social connectedness). A multivariate analysis of covariance was tested with these groups, demographic and HIV serostatus variables as independent variables and covariates, and outcomes as dependent variables. Compared to cisgender, heterosexual people, significantly more cisgender sexual minority people reported worsening physical health, and significantly more gender minority people reported worsening of all outcomes. Significantly more gender minority people reported worsening financial stability than cisgender sexual minority people. COVID has contributed to a worsening of life circumstances among the LGBTQ+ community, especially for gender minority people. More research is needed to create proactive, equitable, culturally-focused responses and interventions to pandemics.

1. Introduction

Lesbian, gay, bisexual, transgender, queer, and other sexual and gender minority (LGBTQ+) people—sometimes collectively referred to as sexual and gender minority people and in this study referred to as "the community" unless stated otherwise—are members of every community and make up at least 5.6% of the total general population of the United States (Jones, 2021). In general, the community experiences barriers to care due to stigma and discrimination (Alencar Albuquerque et al., 2016; Hafeez et al., 2017), financial insecurity, lack of healthcare insurance (Sachdeva et al., 2021), and higher rates of physical and mental health conditions (Gorczynski and Fasoli, 2020; Sachdeva et al., 2021). Additionally, there is a dearth of public health data and research focusing on LGBTQ+ populations (Boehmer, 2002; Ortiz-Martinez and Rios-Gonzalez, 2017), especially during the coronavirus (COVID-19, henceforth referred to as "COVID") pandemic (Cahill et al., 2020; Kumar et al., 2021; Sachdeva et al., 2021).

As of early 2022, there have been over 60 million reported COVID cases and nearly one million COVID-related deaths in the United States (CDC, 2022). There is a lack of data on COVID within the LGBTQ+ community, partially secondary to many national data collection systems not gathering information about sexual orientation and/or gender identity (Cahill et al., 2020). Utilizing pre-COVID data from the 2017–2019 Behavioral Risk Factor Surveillance System, Heslin and Hall (2021) noted that compared to heterosexual people, sexual minority people had significantly higher prevalences of underlying conditions that can lead to severe COVID-related illnesses and death, including cancer (9.2%), kidney disease (4.7%), asthma (13.8%), chronic obstructive pulmonary disease (10.3%), heart disease (8.0%), hypertension (35.7%), stroke (4.7%), obesity (34.1%), diabetes (12.5%), and

Abbreviations: LGBTQ+, lesbian, gay, bisexual, transgender, queer, and other sexual and gender minorities; COVID, coronavirus disease.

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smoking (22.1%). Additionally, pre-COVID data from the Substance Abuse and Mental Health Services Administration's national surveys between 2016 and 2019 have consistently shown increasingly high prevalences of serious mental illness (13.1–18.1%), major depressive episodes (10.5–33.1%), suicidal thoughts (14.5–27.9%), suicidal plans (5.7–11.5%), and suicidal attempts (2.2–5.5%) as well as co-occurring substance use disorders with any mental illness (10.7–12.9%) among sexual minority adults (SAMHSA, 2022). These mental health conditions can likely lead to poor COVID-related physical outcomes, healthcare utilization, and treatment adherence. However, data on COVID-related infection, complications, and death rates for sexual and gender minority people are largely nonexistent (Cahill et al., 2020).

Historically, many LGBTQ+ individuals have suffered stigmatization during past pandemic infectious outbreaks, such as human immunodeficiency virus (HIV), severe acute respiratory syndrome, and influenza H1N1 (Kline, 2020). In parallel, the disparities that LGBTQ+ people face are proposed to have even more severe, adverse consequences on marginalized LGBTQ+ populations due to COVID (Sachdeva et al., 2021). Furthermore, the COVID pandemic has created additional psychosocial stressors, e.g., social distancing and isolation, which have likely exacerbated mental health conditions that were previously highly prevalent within the community, including anxiety, depression (Flentje et al., 2020; Gonzales et al., 2020; Kidd et al., 2021), post-traumatic stress disorder, and substance use disorders (Pedrosa et al., 2020).

Despite a delineation of risk factors and speculation of worsened quality of life outcomes for the LGBTQ+ community during the COVID pandemic, recent data have focused on specific outcomes such as anxiety and depression (Flentje et al., 2020; Gonzales et al., 2020; Kidd et al., 2021) and has been less representative of Black/African American communities and/or people living with HIV, despite notable COVID-related exacerbations of disparities for racial minority populations (Cahill et al., 2020) as well as people living with HIV (Santos et al., 2021; Tesoriero et al., 2021). Moreover, there are no known studies that have comprehensively assessed how COVID has impacted health, social, and occupational areas of functioning of the LGBTQ+ community. Likewise, there are no known comparative studies regarding the impact of COVID on LGBTQ+ communities. As such, this study aimed to examine the impact COVID has had on the LGBTQ+ community, especially regarding changes in physical health, mental health, financial stability, meeting basic needs, and social connectedness. Moreover, comparisons between cisgender, heterosexual community members, cisgender sexual minority people, and gender minority people were conducted to elucidate subgroup differences and in doing so, offer support for culturally-focused responses to pandemics.

2. Methods

2.1. Study design

An anonymous, self-reporting, cross-sectional community needs and impact survey was distributed via email by local LGBTQ+ community organizations of a Midwest state between September and December 2020. Participation was voluntary and anonymous. Survey initiation and completion constituted consent. Deidentified data were provided to the corresponding author and as such was deemed not human subjects research by the Indiana University Institutional Review Board (Protocol #10,797).

2.2. Variables

Participants' demographics (i.e., age, gender identity, sexual orientation, race, ethnicity, and annual income) and HIV serostatus were collected. Additionally, participants were asked how the COVID pandemic has impacted their life circumstances (i.e., physical health, mental health, financial stability, meeting basic needs, and social connectedness—henceforth, collectively referred to as "outcomes" unless stated otherwise) with the options "gotten worse", "no change", "gotten better", or "not applicable".

2.3. Analyses

All results were conducted on SPSS Statistics 26 (IBM Corp., Armonk, NY). Participants were categorized into groups based on gender identity and sexual orientation: cisgender, heterosexual people (i.e., those who identified as exclusively cisgender and heterosexual); cisgender sexual minority people (i.e., those who identified as cisgender and non-exclusively heterosexual); and gender minority people (i.e., those who identified as non-exclusively cisgender). A multivariate analysis of covariance was tested with these groups, demographic and HIV serostatus variables as independent variables and covariates, and outcomes as dependent variables. Post-hoc Fisher's Least Significant Differences tests were used to evaluate differences between groups. Statistical significance was set at $a = 0.05$.

3. Results

3.1. Participants

A total of 335 people completed the survey, 14 of which were excluded from analyses due to missing gender identity and/or sexual orientation (Table 1). The majority were cisgender sexual minority people (57.3%), Caucasian/White (65.3%), not Hispanic and/or Latino (94.0%), with less than $40,000 annual income (55.2%), and HIV negative (48.8%). There were significant differences between cisgender, heterosexual people, cisgender sexual minority people, and gender minority people regarding: 1) age, $F(2, 298) = 4.178$, $p = 0.016$, such that gender minority people were significantly younger than cisgender sexual minority people ($p = 0.045$) and cisgender, heterosexual people ($p = 0.020$); and 2) HIV serostatus, $x^2(4) = 21.514$, $p < 0.001$, such that fewer cisgender sexual minority people had never been tested. There were no significant differences among these groups regarding race, ethnicity, and annual income.

3.2. Group comparisons

There were significant group differences on outcomes based on gender identity and sexual orientation, while adjusting for age, race, ethnicity, annual income, and human immunodeficiency virus serostatus (Table 2). In general, compared to cisgender, heterosexual people, more sexual and gender minority people reported that outcomes had worsened since the COVID pandemic, with gender minority people reporting the highest rates of worsening outcomes. Specifically, significantly more cisgender sexual minority people reported worsening physical health ($p = 0.025$) and marginally more reported worsening mental health ($p = 0.077$) and social connectedness ($p = 0.064$) than cisgender, heterosexual people. Significantly more gender minority people reported worsening physical health ($p = 0.006$), mental health ($p = 0.021$), financial stability ($p = 0.006$), meeting basic needs ($p = 0.011$), and social connectedness ($p = 0.011$) than cisgender, heterosexual people. Significantly more gender minority people reported worsening financial stability ($p = 0.002$) than cisgender sexual minority people.

4. Discussion

This study sought to quantify the impact of COVID on the LGBTQ+ community to better understand the effects of the pandemic and ways to improve public health. This proposed evaluation requires understanding how COVID has impacted this community's health, social, and occupational areas of functioning. Since the pandemic, there has been heightened distress for the general population (Holmes et al., 2020) and especially the LGBTQ+ community. Specifically, several life

Table 1
Survey variables.

	Cisgender, heterosexual people (*n*=63)	Cisgender sexual minority people (*n*=184)	Gender minority people (*n*=74)
Age	41.72 (13.09)	39.95 (12.74)	35.50 (13.44)
Gender identity			
Agender	-	-	1 (0.3)
Cisgender man	19 (30.2)	129 (70.1)	-
Cisgender woman	44 (69.8)	55 (29.9)	-
Genderqueer	-	-	11 (14.9)
Nonbinary	-	-	29 (39.2)
Transgender man	-	-	9 (12.2)
Transgender woman	-	-	17 (23.0)
Other	-	-	7 (9.5)
Sexual orientation			
Asexual	-	6 (3.3)	4 (5.4)
Bisexual	-	29 (15.8)	12 (16.2)
Gay	-	113 (61.4)	10 (13.5)
Heterosexual	63 (100.0)	-	3 (4.1)
Lesbian	-	13 (7.1)	14 (18.9)
Pansexual	-	13 (7.1)	9 (12.2)
Queer	-	5 (2.7)	20 (27.0)
Other	-	5 (2.7)	2 (2.7)
Race			
Asian/Asian American	-	2 (1.2)	2 (2.9)
Black/African American	22 (35.5)	43 (24.9)	13 (19.1)
Caucasian/White	36 (58.1)	114 (65.9)	48 (70.6)
Other	4 (6.5)	14 (8.1)	5 (7.4)
Ethnicity			
Hispanic and/or Latino	4 (6.6)	13 (7.6)	1 (1.5)
Not Hispanic and/or Latino	57 (93.4)	159 (92.4)	67 (98.5)
Annual income			
<$10,000	13 (21.3)	35 (19.4)	17 (23.0)
$10,001-20,000	12 (19.7)	20 (11.1)	9 (12.2)
$20,001-40,000	10 (16.4)	37 (20.6)	21 (28.4)
$40,001-60,000	8 (13.1)	34 (18.9)	14 (18.9)
$60,001-80,000	4 (6.6)	12 (6.7)	7 (9.5)
$80,001-100,000	6 (9.8)	15 (8.3)	2 (2.7)
$100,001-150,000	5 (8.2)	17 (9.4)	3 (4.1)
$150,000+	3 (4.9)	10 (5.6)	1 (1.4)
HIV serostatus			
HIV negative	21 (34.4)	91 (53.5)	33 (50.0)
HIV positive	25 (41.0)	66 (38.8)	16 (24.2)
Never been tested	15 (24.6)	13 (7.6)	17 (25.8)

Abbreviations: HIV, human immunodeficiency virus
For "other" categories:
• sexual orientation: cisgender sexual minority people (demisexual & queer, *n*=1; not applicable, *n*=3; no label, *n*=1) and gender minority people (demisexual & panromantic, *n*=1; other, *n*=1)
• gender identity: gender minority people (genderfluid, *n*=1; genderqueer & nonbinary, *n*=1; not noted, *n*=2; other, *n*=3)
• race: cisgender, heterosexual people (Hispanic, *n*=1; Italian American, *n*=1; multiracial, *n*=2), cisgender sexual minority people (Armenian, *n*=1; Hispanic, *n*=3; Latino & Afro-American, *n*=1; mestiza, *n*=1; mixed, *n*=3; not applicable, *n*=2; not noted, *n*=1; other, *n*=1; Spanish & White, *n*=1), gender minority people(biracial, *n*=1; American Indian & Caucasian, *n*=1; Jewish, *n*=2; not noted, *n*=1)

circumstances, including physical health, mental health, financial stability, meeting basic needs, and feelings of social connectedness, have significantly changed for the LGBTQ+ community. Overall, these outcomes have worsened for gender minority people at a higher rate than for cisgender, heterosexual people and even cisgender sexual minority people.

Regarding physical functioning, over half of gender minority people and one-third of cisgender sexual minority people reported worsening physical health. These findings are similar to data by Heslin and Hall (2021), who found that sexual minority people have higher prevalences of many underlying conditions associated with severe COVID-related illnesses than heterosexual people. These increased risks for the LGBTQ+ population likely stem from reports of stigmatizing experiences in healthcare and lack of provider knowledge (Krause, 2021). Another important consideration is the close living proximity of dense marginalized communities, which can increase risk for infections (Cahill et al., 2020) and subsequent poorer physical health (Chatterjee et al., 2020).

Considering mental functioning, over three-fourths of gender minority people and two-thirds of cisgender sexual minority people disclosed worsening mental health. The pandemic has resulted in fear, social isolation, and loneliness as well as a lack of access to community groups, all of which can worsen anxiety, depression, and suicidality for the LGBTQ+ population (Holloway et al., 2021; Pedrosa et al., 2020). These findings parallel those by Flentje and colleagues (2020), who noted increased anxiety and depression among sexual and gender minority people after the onset of the COVID pandemic. Similarly, Gonzales et al. (2020) found that 60% of lesbian, gay, bisexual, and transgender (LGBT) college students reported experiencing anxiety and depression during the pandemic. However, neither of those studies provided comparison samples of cisgender, heterosexual people, over half (in this study) of whose mental health has also worsened due to COVID.

With respect to financials, nearly two-thirds of gender minority people and over one-third of cisgender sexual minority people conveyed worsening financial stability. Equivalently, Sears and colleagues (2021) found that during the pandemic many more LGBT adults (12.4%) than non-LGBT adults (9.7%) were laid off or furloughed from work. Perhaps these findings are partially a function of occupational differences (Cahill et al., 2020) and consequent disproportionate COVID-induced job loss, as 40% of lesbian, gay, bisexual, transgender, and queer or questioning (LGBTQ) people work in service-related industries compared to 22% of non-LGBTQ people (Salerno et al., 2020).

Taking into account the ability to meet basic needs, nearly one-third of gender minority people and one-fourth of cisgender sexual minority people endorsed worsening outcome. Other studies have shown similar rates of the community reporting issues paying for basic household goods and rent or mortgage (Sears et al., 2021) as well as utilities, medical care, credit card bills, loans, and other debt (Movement Advancement Project, 2020) since the pandemic began. While the community was previously disproportionately impacted by poverty, lack of insurance, and unemployment (Phillips II et al., 2020), the COVID pandemic seems to have further exacerbated the population's ability to obtain basic necessities.

With reference to social affinity, well over three-fourths of gender minority people and slightly more than three-fourths of cisgender sexual minority people expressed worsening social connectedness. A review by Drabble and Eliason (2021) concluded that community is an important support system for LGBTQ+ people, especially for those who have been social distancing with families of origin. In addition, there is evidence that governments around the world have used COVID restrictions to target LGBTQ+ people with forms of discrimination and violence (Wallach et al., 2020). This COVID-induced isolation and distress, which has been perpetuated by institutional prejudice, appears to be contributing to a fragmentation of the LGBTQ+ community.

4.1. Limitations

There are several noteworthy study limitations. First, data collection was limited to a Midwestern state. Second, while this study conducted group comparisons to elucidate subgroup differences, cisgender sexual

Table 2
Group differences on COVID-impacted outcomes within the LGBTQ+ community

	% indicating that life circumstances have "gotten worse" since the COVID pandemic				
	Cisgender, heterosexual people	Cisgender sexual minority people	Gender minority people	*F*(2,244)	*p*-value
Physical health	23.3	33.5	51.4	4.003	0.019
Mental health	53.3	67.6	75.7	2.772	0.065
Financial stability	34.5	37.9	62.5	5.882	0.003
Meeting basic needs	18.6	23.0	32.4	3.317	0.038
Social connectedness	67.2	77.8	86.3	3.310	0.038

Abbreviation: LGBTQ+, lesbian, gay, bisexual, transgender, queer, and other sexual and gender minorities

people and gender minority people are heterogeneous populations and may not represent these communities in their entirety. Third, sample sizes limited further subgrouping based on sexual orientation and/or gender identity (e.g., bisexual, pansexual, queer, nonbinary, and genderqueer people). Fourth, although this study polled several Black/African American people and people living with HIV and race and HIV serostatus were significant variables for particular study outcomes (data not shown), these important differences and the salience of intersectionality for LGBTQ+ healthcare disparities were not explored comprehensively. Additionally, many other racial and/or ethnic minority people, who have also been profoundly impacted by COVID, were not represented in this study.

4.2. Conclusion

The COVID pandemic has contributed to a worsening of life circumstances, including physical health, mental health, financial stability, meeting basic needs, and feelings of social connectedness, among the LGBTQ+ community. Moreover, there are specific subgroup differences, with gender minority people facing poorer health, social, and occupational areas of functioning. These findings call for action for more research to understand how the LGBTQ+ population and especially its subgroup communities are impacted during this and future eras of public health crises. Such work would lead to more proactive, equitable, culturally-focused responses and interventions.

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Dustin Z. Nowaskie: Formal analysis, Supervision, Investigation, Data curation, Writing – original draft, Writing – review & editing, Visualization. **Anna C. Roesler:** Investigation, Data curation, Writing – original draft, Writing – review & editing, Visualization.

Declarations of Competing Interest

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