

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/334681421>

Are we doing alright? Realities of violence, mental health, and access to healthcare related to sexual orientation and gender identity and expression in South Africa: Research repo...

Technical Report · July 2019

CITATIONS

0

READS

8

3 authors, including:



Alex Müller

University of Cape Town

55 PUBLICATIONS 312 CITATIONS

[SEE PROFILE](#)



Kristen Daskilewicz

University of Cape Town

24 PUBLICATIONS 53 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Strengthening medical abortion provision in South Arica [View project](#)



Researching the provision of gender affirming care in the absence of clinical guidelines in South Africa [View project](#)

Are we doing alright?

Realities of violence, mental health and access to healthcare related to sexual orientation and gender identity and expression in South Africa

RESEARCH REPORT BASED ON A COMMUNITY-LED STUDY IN NINE AFRICAN COUNTRIES

ALEX MÜLLER, KRISTEN DASKILEWICZ AND THE SOUTHERN AND EAST AFRICAN RESEARCH COLLECTIVE ON HEALTH (SEARCH)



To cite this report:

Müller, A., Daskilewicz, K. and the Southern and East African Research Collective on Health (2019). 'Are we doing alright? Realities of violence, mental health, and access to healthcare related to sexual orientation and gender identity and expression in South Africa: Research report based on a community-led study in nine countries'. Amsterdam: COC Netherlands.

Contributors to the South Africa country report:

Bonisiwe Buthelezi, Matthew Clayton, Siphe Magudulela, Jay Matlou, Johan Meyer, Mabhuti Mkangeli, Sbo Nxumalo, Akani Shimange, as well as fieldworkers from Durban Lesbian and Gay Community and Health Centre, Gender Dynamix, OUT LGBT Wellbeing and Triangle Project.

This report is part of a series of ten reports.

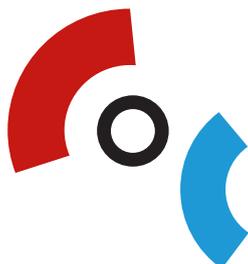


This publication is published under Creative Commons 4.0

You are free to share, copy and redistribute the material in any medium or format under the following conditions:

- Attribution** — You must attribute the work in the manner specified above (but not in any way that suggests the author endorses you or your use of the work).
- Non-commercial** — You may not use the material for commercial purposes.
- No derivatives** — If you remix, transform, or build upon the material, you may not distribute the modified material.

This document is published jointly by COC Netherlands and the Southern and East African partners of COC, who receive funding from the Ministry of Foreign Affairs of The Netherlands.



Are we doing alright?

Realities of violence, mental health and access to healthcare related to sexual orientation and gender identity and expression in South Africa

RESEARCH REPORT BASED ON A COMMUNITY-LED STUDY IN NINE AFRICAN COUNTRIES

ALEX MÜLLER, KRISTEN DASKILEWICZ AND THE SOUTHERN AND EAST AFRICAN RESEARCH COLLECTIVE ON HEALTH (SEARCH)



The SEARCH Collective

Zimbabwe



Gays and Lesbians of Zimbabwe



Sexual Rights Centre

Botswana



Bonela



Lesbians, Gays and Bisexuals of Botswana



Rainbow Identity Association

Zambia



Friends of Rainka

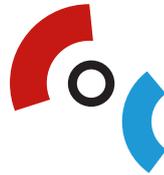


The Lotus Identity



TransBantu Zambia

Netherlands



COC



South Africa



Durban Lesbian and Gay Community and Health Centre



Gender Dynamix



Gender Health and Justice Research Unit, University of Cape Town



OUT LGBT Well-Being



Triangle Project

Lesotho

The People's Matrix
Association



Ethiopia

Two organisations (names withheld)

Kenya

Ishtar-MSM



Jinsiangu



Maaygo



Minority Womyn in
Action



National Gay and
Lesbian Human
Rights Commission



People Marginalised
and Aggrieved



eSwatini

The Rock of Hope



Malawi

Centre for the
Development of
People



ACKNOWLEDGMENTS

To conceptualise, coordinate, implement, analyse, write and disseminate a large, multi-site study through collaboration and partnership would not have been possible without the immense support and dedication of many, many people, within and outside of the SEARCH collective.

First and foremost, we thank all research participants, who shared their time and were willing to answer difficult questions, even when there were potential risks involved at times.

The research coordinators, research assistants and fieldworkers from all civil society organisations involved worked tirelessly to find and interview participants. Thank you: without you this project would not have been possible.

Our Study Oversight Committee provided guidance and on-going opportunity for reflection. Thank you to Prof Lillian Artz, Jillian Butterworth, Lucinda van der Heever, Bram Langen, Dr Ingrid Lynch, Dr Olusegun Odumosu and Liesl Theron.

We would like to thank Dr Anneli Hardy, who has provided expertise and support for the statistical analysis; our colleagues Dr Aisling Heath, Talia Meer, Vuyelwa Mehlomakhulu and Dr Virginia Zweigenthal, who read and commented on earlier versions of this report; and our research interns and assistants, Mina Haji, Marie Lunau, Lilian Mubangizi, Agatha Nyambi and Leslene Stott, who assisted with countless small and not-so-small tasks that enabled the work daily.

We especially thank our colleagues who supported this project as local co-investigators: Sindy Matse from the National AIDS Council in eSwatini, Dr Chelsea Morroni from the Botswana UPenn Partnership and Liverpool School of Tropical Medicine, Prof Adamson Muula from the College of Medicine at the University of Malawi, and Nelson Muparamoto from the Department of Sociology at the University of Zimbabwe.

There have been many others who have shared insights, and given practical, intellectual and emotional support through this long, sometimes difficult, but fruitful process, and we are grateful to everyone who has supported this project over the last several years across countries and continents.

This work has truly been the product of queer labour, and whilst the report documents the manifold challenges faced by LGBTI people in East and Southern Africa, it is equally testament to our mutual care, our resilience, resourcefulness and agency.

Contents

- The SEARCH Collective 2
- REPORT SUMMARY 10**
 - Introductory comments 10
 - Sexual orientation, gender identity and expression and minority stress 12
 - Sexual orientation, gender identity and expression and structural stigma 13
 - The structure of this report..... 14
- METHODOLOGY 15**
 - Participatory approach 15
 - Study design..... 17
 - Design of study aims 17
 - The survey 17
 - Fieldworker training 20
 - Who could participate in the survey?..... 21
 - Sampling methodology 21
 - Collecting data 22
 - Pilot study 22
 - Analysing data 23
 - Research approvals and regulatory compliance..... 23
- FINDINGS IN SOUTH AFRICA 24**
 - Sexual orientation, gender identity and expression in South Africa 24
 - The study population: sample characteristics 25
 - Sociodemographic characteristics 26
 - Sexual and gender diversity / sexual orientation and gender identity 28
 - Socioeconomic circumstances 31
 - Social support and being 'out' 33
 - Health-seeking behaviour 35
 - Gender affirming practices 36
 - Discrimination in healthcare 37
 - Experiences of violence 39
 - Verbal harassment 40
 - Sexual violence 41
 - Physical violence 45
 - Perpetrators of sexual and physical violence 47
 - Impact of violence 50
 - Mental health outcomes..... 51
 - Mental health outcomes in the overall sample 51
 - Depression 54
 - Anxiety 57
 - Suicidality 60
 - Alcohol use..... 64
 - Drug use 68
 - Tobacco use 70

Experiences of violence and health outcomes of lesbian participants	73
Experiences of violence and health outcomes of gay participants	76
Experiences of violence and health outcomes of bisexual participants	79
Bisexual women	79
Bisexual men	80
Experiences of violence and health outcomes of participants with 'non-normative' sexual orientations.....	83
Experiences of violence and health outcomes of gender minority participants	87
Access to and use of gender affirming care	87
Health outcomes	88
LIMITATIONS	92
CONCLUSION	93
RECOMMENDATIONS	95
Recommendations for national government.....	95
Recommendations for civil society organisations	95
Recommendations for donors	96
Recommendations for academics and researchers.....	96
Recommendations for healthcare providers.....	97
REFERENCES	98
GLOSSARY OF TERMS RELATED TO SEXUAL ORIENTATION, GENDER IDENTITY AND EXPRESSION	103
GLOSSARY OF TERMS RELATED TO THE STATISTICAL ANALYSIS	105
APPENDIX 1: DETAILED METHODOLOGY	107
Measures: Sexual orientation and gender identity	107
Survey questions.....	107
Categorisation for analysis.....	107
Sexual orientation.....	108
Gender identity.....	109
Measures: Mental health	109
CES-D 10: Depression	109
GAD-7: Anxiety	109
AUDIT: Alcohol.....	109
DUDIT: Drugs	110
Signs of post-traumatic stress.....	110
Sampling and enrolment.....	110
Data management	113
Data quality	113
Data cleaning	113
Conflicting data	114
Data analysis.....	114
Describing the data	114
Measuring associations	114
Logistic regression.....	115
Missing data	116
APPENDIX 2: QUESTIONNAIRE	118

List of tables

Table 1:	Community partner organisations.....	16
Table 2:	Number of participants, by country	22
Table 3:	Research approvals.....	23
Table 4:	Methods of data collection among South African partner organisations.....	26
Table 5:	Sociodemographic characteristics	27
Table 6:	Participants' self-identification of sexual orientation and gender identity	28
Table 8:	Social support and being 'out'	34
Table 9:	Gender affirming practices	36
Table 10:	Access to gender affirming care.....	36
Table 11:	Healthcare access and discrimination.....	37
Table 12:	Harassment and violence, overall sample and by race and gender identity.....	40
Table 13:	Perpetrators of violence	48
Table 14:	Reporting violence	50
Table 15:	Overall mental health outcomes	52
Table 16:	Logistic regression model of adjusted odds ratios for depression (CES-D 10 cut-off of 10): significant p-values only	56
Table 17:	Logistic regression model of adjusted odds ratios for anxiety (GAD-7 cut-off of 10): significant p-values only	59
Table 18:	Logistic regression models of adjusted odds ratio for suicidal ideation and suicide attempt in the past year: significant p-values only	63
Table 19:	Logistic regression model of adjusted odds ratios for harmful alcohol use: significant p-values only	67
Table 20:	Logistic regression model of adjusted odds ratios for harmful drug use (DUDIT cut-off of 6): significant p-values only	70
Table 21:	Health outcomes and experiences of violence of lesbian participants	73
Table 22:	Health outcomes and experiences of violence of gay participants	76
Table 23:	Health outcomes and experiences of violence of bisexual participants.....	80
Table 24:	Health outcomes and experiences of violence of participants with 'non-normative' sexual orientations.....	84
Table 25:	Gender affirming practices	87
Table 26:	Health outcomes and experiences of violence of all gender minority participants, transgender women, transgender men and gender non-conforming participants	89

List of Figures

Figure 1:	Map of data collection	25
Figure 2:	Botswana: participant sample.....	26
Figure 3:	Participants' sexual orientations.....	30
Figure 4:	Participants' gender identity.....	30
Figure 5:	Health-seeking behaviour in previous year	34
Figure 6:	Verbal harassment, past year	39
Figure 7:	Sexual violence, lifetime	39
Figure 8:	Sexual violence, past year prevalence	39
Figure 9:	Sexual violence, by sexual orientation	40
Figure 10:	Sexual violence, by gender identity	40
Figure 11:	Physical violence, lifetime	42
Figure 12:	Physical violence, past year.....	42
Figure 13:	Physical violence, by sexual orientation.....	43
Figure 14:	Physical violence, by gender identity.....	43
Figure 15:	Level of depression in overall sample	50
Figure 16:	Depression diagnosis and treatment.....	50
Figure 17:	Levels of depression, by sexual orientation	51
Figure 18:	Depression by gender identity	51
Figure 19:	Current signs of anxiety, overall sample	52
Figure 20:	Participants previously diagnosed with anxiety & their treatment.....	53
Figure 21:	Anxiety levels by sexual orientation	53
Figure 22:	Anxiety levels by gender identity	54
Figure 23:	Suicidal ideation	55
Figure 24:	Suicide attempts, lifetime and previous year	55
Figure 25:	Suicide attempts, by sexual orientation.....	56
Figure 26:	Suicide ideation and attempt by gender identity.....	56
Figure 27:	Alcohol use, overall sample	58
Figure 28:	Alcohol use by sexual orientation	58
Figure 29:	Alcohol use, by gender identity	59
Figure 30:	Drugs use levels in total sample.....	61
Figure 31:	Drug use, by sexual orientation.....	61
Figure 32:	Drug use, by gender identity.....	62
Figure 33:	Participant tobacco use.....	63
Figure 34:	Tobacco use by sexual orientation.....	63
Figure 35:	Tobacco use by gender identity	64
Figure 36:	Gender identity of lesbian participants	65
Figure 37:	Gender identity of gay participants	68
Figure 38:	Gender identity of bisexual participants	71
Figure 39:	Sexual orientation of gender minority participants	75

LIST OF ACRONYMS

ACHPR	African Commission for Human and People's Rights
AOR	Adjusted odds ratio
AUDIT	Alcohol Use Disorders Identification Test
CBPR	Community-based participatory research
CEDEP	Centre for the Development of People
CES-D10	10-item Centre for Epidemiological Studies Depression Scale
CI	Confidence interval
COC	Cultuur en Ontspanningscentrum (Center for Culture and Leisure)
DSM	Diagnostic and statistical manual of mental disorders
DUDIT	Drug Use Disorders Identification Test
EDMS	Electronic Data Management System
GAD-7	Generalized Anxiety Disorder 7-item scale
GALZ	Gays and Lesbians of Zimbabwe
GATE	Global Action for Trans* Equality
GHJRU	Gender Health and Justice Research Unit
GNC	Gender non-conforming
HCT/ HIV VCT	HIV voluntary testing and counselling
ICD	International Classification of Disease
LGBT	Lesbian, Gay, Bisexual and Transgender
LGBTI	Lesbian, Gay, Bisexual and Transgender and Intersex
MSM	Men who have sex with men
NGLHRC	National Gay and Lesbian Human Rights Commission
NGO	Non-governmental organisation
n	Sample size
p	p value
SGM	Sexual and gender minority
SOGI	Sexual orientation and gender identity
SOGIE	Sexual orientation and gender identity and expression
SRC	Sexual Rights Centre
STI	Sexually transmitted infection
TBZ	Trans Bantu Zambia
UCT	University of Cape Town
US	United States
WHO	World Health Organization
WSW	Women who have sex with women

REPORT SUMMARY

This report presents research findings on the mental health and well-being of lesbian, gay, bisexual, transgender and intersex (LGBTI) people in South Africa. It also presents findings on LGBTI people's experiences of violence, and experiences in accessing healthcare.

It is part of a series of reports based on research in nine countries of Southern and East Africa: in Botswana, Ethiopia, Kenya, Lesotho, Malawi, South Africa, eSwatini, Zambia and Zimbabwe. The research was done collaboratively by a consortium of non-governmental organisations (NGOs), academic researchers from the University of Cape Town, and COC Netherlands who funded the project and provided logistical support.

Across those nine countries, we used a standardised questionnaire to survey 3,796 people, and ask about physical and sexual violence, depression, anxiety, suicidality and substance use, as well as experiences of discrimination when accessing healthcare.

The findings give us a sense of the precarious state of LGBTI people's mental health and well-being in East and Southern Africa, and the high levels of violence that LGBTI people experience: compared to what we know from the general population, LGBTI people have higher levels of mental health concerns, have experienced more violence, and have faced barriers to healthcare that are directly linked to their sexual orientation, gender identity or gender expression.

Our findings show that in the nine countries of this study, as elsewhere in the world, discrimination, stigma and marginalisation related to sexual orientation, gender identity and gender expression place LGBTI people at higher risk for mental health concerns and violence.

Introductory comments

Over the last two decades research on lesbian, gay, bisexual and transgender persons, health and violence has highlighted substantial vulnerabilities and health disparities based on sexual orientation, and gender identity and expression in many parts of the world. There is growing awareness of the broad ranging negative consequences of stigma, marginalization and discrimination on the health of people who identify as, or are perceived to be, lesbian, gay, bisexual, transgender and gender diverse (LGBT) (Mayer *et al.*, 2008; Institute of Medicine, 2011; Logie, 2012; Pega and Veale, 2015). For example, in a recent landmark report on LGBT health (Institute of Medicine, 2011), the United States Institute of Medicine pointed out that LGBT people are at increased risk of violence, harassment, and victimization. These findings underscore the link between stigma, marginalization and discrimination and corroborate that sexual orientation, gender identity and expression are important determinants of vulnerability and health (Logie, 2012; Pega and Veale, 2015).

LGBT people are not a homogenous population. The acronyms LGBT or LGBTI (“I” for intersex¹) group individuals together based on similar experiences of discriminatory treatment in society because they fall outside of social norms about sexuality and gender, due to their sexual orientation, gender identity, gender expression, and/or sex characteristics. While this is helpful to analyse the consequences of marginalization, it is important not to assume that individuals under this umbrella acronym necessarily have similar experiences or needs. In fact, individual experiences differ greatly across the populations covered under the acronym. Thus, the populations represented by each individual letter in the acronym are complex and heterogeneous, even more so when differences in race, age, ability, religion, culture, socioeconomic class, and geographic location are also taken into account. In this report, we use the acronym LGBTI in order to point to similar experiences of stigma, marginalization and discrimination based on sexual orientation, gender identity, gender expression and sex characteristics in heteronormative societal frameworks. However, frequently we disaggregate this umbrella into its constituent groups in order to highlight specific characteristics and differences.

Until 1973, the American Psychological Association considered same-sex orientation, attraction, and behaviour (formerly referred to narrowly as homosexuality) to be a mental illness. It is now widely recognised that what is considered a mental illness depends on what society and scientists at a certain time and in a certain context agree to be ‘abnormal’ behaviours, cognitions and emotions (Gergen, 2001). Today, international medical and health organisations, such as the World Psychiatry Association have clearly stated that same-sex orientation, attraction, and behaviour are not mental illnesses, and that attempts to ‘treat’ same-sex sexual orientation are harmful and without evidence of success (Bhugra *et al.*, 2016). The South African Society of Psychiatrists agrees that “there is no scientific evidence that reparative or conversion therapy is effective in changing a person’s sexual orientation. There is, however, evidence that this type of therapy can be destructive” (Victor *et al.*, 2014). Further, in 2015 a panel of experts from the Academy of Science of South Africa, endorsed by the Uganda National Academy of Sciences, condemned the use of ‘conversion’ therapy and called for widespread interventions to generate support for LGBTI people, particularly among healthcare providers (Academy of Science of South Africa, 2015).

Gender variance or diversity (formerly called non-conforming or transgender gender identity), unlike same-sex sexual orientation, remains classified as a mental illness by the American Psychological Association. Many argue that this is for the same reasons that same-sex sexual orientation was once classified as a mental illness (Drescher, 2015), and that gender variance is not pathological (Kara, 2017; Suess Schwend *et al.*, 2018). In the process of revising the International Classification of Disease (ICD), the World Health Organisation is thus proposing to remove the diagnosis related to gender variance from the list of mental health conditions (De Cuypere and Winter, 2016; Robles *et al.*, 2016; World Health Organization, 2018a).

1 People with diverse sex characteristics, (also referred to as ‘intersex’) share similar experiences of discrimination and marginalisation as people with non-normative sexual orientations, gender identities and expressions. Additionally, people with diverse sex characteristics often have experienced forced genital mutilation by healthcare providers, and experience the physical, psychological and emotional consequences thereof. It was outside the scope of this research project to investigate these forced treatments. We strongly recommend that specific research into forced genital mutilations, and the impact of those on people with diverse sex characteristics, be done.

Diversity in sex characteristics (formerly called 'intersex'), like gender variance, remains classified as a pathological condition in the current classification of disease (World Health Organization, 2018b). Like for gender variance, many argue that this is a reflection of social attitudes towards diversity in sex characteristics, that such diversity is not per se pathological, and that regarding diversity of sex characteristics as a pathology increases the vulnerability of people to forced genital surgery, which is recognised as unlawful (GATE, 2017).

Sexual orientation, gender identity and expression and minority stress

Now that it is widely understood that same-sex sexual orientation and gender variance are not mental illnesses themselves, researchers have started to look at the mental health and well-being of people who identify as lesbian, gay, bisexual, transgender and intersex. Whilst this work is largely based in the US, the circumstances of minority stress for people on the African continent may not be all that different, and it is useful to know about the work that has already been done in the US in order to contextualise and interpret the findings of this report.

Researchers have found that compared with their heterosexual, cisgender counterparts, sexual and gender minority² populations suffer from more mental health problems, such as substance use (including alcohol, tobacco and illegal drug use), affective disorders (for example, depression and anxiety disorders) and suicide (Meyer, 2003; Hendricks and Testa, 2012; Bockting *et al.*, 2013a). The reason for these disparities in mental health outcomes is that stigma (widespread disapproval held by many people in a society), prejudice, discrimination and structural stigma (social stigma that is institutionalised or made into law, such as laws that criminalise consensual same-sex behaviour), lead to stressful social environments for sexual and gender minorities (Meyer, 2003; Hendricks and Testa, 2012; Hatzenbuehler *et al.*, 2014). This is called minority stress.

Meyer (2003) points out that minority stress adds to general stress that all people experience. It is chronic – that is it lasts a long time, or a person's entire life, as it is linked to underlying social and cultural norms (and stigma) that are relatively stable and only change slowly, if at all. Lastly, minority stress is socially based – that means it stems from social processes, institutions and structures (for example, laws that criminalise consensual same-sex activity), and not from individual events (such as change in financial circumstances, or death of a loved one).

Meyer (2003) also explains how minority stress affects people with same-sex sexual orientation, attraction, and behaviour, and suggests that there are four different processes that contribute to minority stress and mental health problems among sexual minorities. First, chronic and acute events or social circumstances might add to stress. This might include experiences of discrimination in healthcare facilities or schools, or being insulted or harassed in private or public. Second, expecting such stressful events, and guarding oneself against them, also leads to stress (regardless of whether or not the discriminatory encounter actually happens). Third, hearing negative, discriminatory attitudes means that people internalise the idea that they have less value. And fourth, hiding one's sexual orientation in anticipation of discriminatory events further contributes to stress.

2 For the purposes of this report, gender minority people are those who do not identify as cisgender, and are inclusive of the following: those who self-identify as transgender, gender non-conforming (GNC) or non-binary, have a different gender identity from what was assigned to them at birth, and/or identify as intersex.

Hendricks and Testa (2012) explain how minority stress affects gender minority people, and argue that the same factors shape minority stress for this group. That is, as with same-sex sexual orientation, it is not gender variance itself that is a mental illness, but that, essentially, “hostile and stressful social environments” (p. 462) lead to an increase in mental health problems among gender minority people.

Sexual orientation, gender identity and expression and structural stigma

Stigma against same-sex orientation and gender variance is one of the key factors that underlie the stressors in the minority stress model. A recent study built on the work by Meyer (2003) and Hendricks and Testa (2012) and examined the impact stigma has on the health and well-being of sexual minority³ people. This study specifically looked at the impact of structural stigma, defined as social prejudice against lesbian, bisexual and gay people at the community level. This study found that sexual minorities who lived in areas with high structural stigma in the United States were three times more likely to die from homicide and violence-related deaths, when compared to sexual minority people living in areas with low structural stigma (Hatzenbuehler *et al.*, 2014), though this was later shown not to be statistically significant (Hatzenbuehler *et al.*, 2018). The study also showed that sexual minorities in high-stigma areas were more likely to die from suicide. Additionally, those who died from suicide in high-stigma areas were on average 18 years younger than those who died from suicide in low-stigma areas. This confirmed the findings of an earlier study that showed that lesbian, gay and bisexual youth in areas with high anti-gay prejudice were more likely to attempt suicide (Hatzenbuehler, 2011).

The authors of the earlier study pointed out similarities to other forms of minority status and structural stigma, and concluded that structural stigma also includes laws that criminalise, or restrict, the activities or identity of a minority group. One example are American laws that enforced racial segregation in some American states until the 1960s. A study that looked at the health consequences of structural stigma among Black people found that states with laws that enforced racial segregation had higher death rates of Black people (Krieger, 2012). Recent studies from the United States show that sexual orientation-related discriminatory laws and policies – laws and policies that deprive sexual minorities of certain rights (for example, the right to marry) – contribute to higher levels of mental health problems among sexual minority populations (Hatzenbuehler, Keyes and Hasin, 2009; Hatzenbuehler *et al.*, 2010). This is significant in the context of Southern and East Africa, where many countries have retained British colonial laws that criminalise consensual same-sex activity (Ambani, 2017), and thus discriminate against sexual and gender minority populations (Carroll and Mendos, 2017).

The findings that we present in this report demonstrate that, much like what we know from other contexts, sexual orientation and gender identity seem to be an influencing factor for people’s mental health and well-being, for their experiences of violence and for their access to healthcare.

3 For the purposes of this report, sexual minority people are those who do not identify as heterosexual, and are inclusive of the following: those who self-identify as lesbian, bisexual, gay, queer, pansexual, anyone who feels sexual attraction to, or has had sexual experiences with, a partner or partners of the same sex or gender, even if they self-identified as heterosexual, ‘men who have sex with men’ (MSM), and/or ‘women who have sex with women’ (WSW)

Similar to what researchers have observed in other parts of the world (Meyer, 2003; Mayer *et al.*, 2008b; Institute of Medicine, 2011b), we found disparities in health status between the LGBTI people participating in this study and data that exists for the general population: LGBTI people showed higher levels of mental health problems, experienced higher levels of violence and more barriers when accessing healthcare services. Drawing on the existing evidence on the impact of minority stress (Meyer, 2003) and structural stigma (Hatzenbuehler *et al.*, 2014), we argue that these disparities are due to the stigma, prejudice and social exclusion that LGBTI people experience due to their sexual orientation and/ or gender identity.

The structure of this report

This report consists of four sections. The first section is this introduction. The second section gives information about the methods we used in our study. We then move on to the third section to present our findings for the specific country under consideration: South Africa. We first describe the socio-political context in which LGBTI people live. We then describe the research findings: first we describe the group of participants, then we describe the findings on health-seeking behaviour. We then describe the findings on experiences of violence, and after that describe the mental health outcomes of depression, anxiety, alcohol use, drug use, tobacco use and suicidality. When describing these findings, we compare our findings to what we know from studies with LGBTI people in other parts of the world, and to what we know about the general population in the specific country that the study was conducted in. Following this, we present an overview of the mental health outcomes for each specific population: for lesbian women, for gay men, for bisexual women and men, as well as for transgender people (including transgender women, transgender men and gender non-conforming people). This serves as an easy reference for anybody interested in population-specific health concerns. The fourth section of the report provides recommendations for governments, non-governmental organisations, academic researchers and international and national donors. In the appendices, we provide more detailed information about our methodology, and include the survey instrument.



METHODOLOGY

This section describes how we conducted the study. We explain how we planned the study, what questions we asked, and what we did with the data that we collected. We also provide details about who officially approved the study in the nine countries that we conducted it.

Participatory approach

For this study, we followed a community-based participatory research (CBPR) approach. Community-based research is a partnership approach to research that involves community members and academic researchers as partners in all stages of the research process. In this way, all partners can contribute their knowledge and skills, can decide jointly on what to research, how to do it, and what to do with the research findings. It also means that all partners share the responsibility and the ownership of the process and the research findings (Israel *et al.*, 1998).

CBPR is a well-used approach for studies that explore health-related disparities, particularly among marginalised communities, such as people of colour, or people living in poverty (Israel *et al.*, 2010). Because it directly involves communities as co-researchers, it is an excellent approach to examine the social context of health concerns (Leung, Yen and Minkler, 2004). Because it emphasises that power is shared between researchers and the community, and because it focuses on action based on the research findings, it also helps to minimise the understandable distrust of academic research that often exists among marginalised communities, who may see academics as mining information or misrepresenting them (Israel *et al.*, 2010).

The 23 community partner organisations for this study are listed in Table 1. The academic partner was the Gender Health and Justice Research Unit at the University of Cape Town in South Africa. Additional academic partners were Dr Chelsea Morrone from the Botswana UPenn Partnership and Liverpool School of Tropical Medicine; Prof Adamson Muula from the College of Medicine, University of Malawi; Sindy Matse from the National AIDS Council in the Ministry of Health of eSwatini and Nelson Muparamoto from the University of Zimbabwe. The project was funded by COC Netherlands, who also provided logistical support throughout the process.

TABLE 1: Community partner organisations

Country	Partner Organisations
Botswana	
	Bonela
	LeGaBiBo
	Rainbow Identity Association
Ethiopia	
	<i>Names of the two organisations withheld for safety reasons</i>
Lesotho	
	The People's Matrix Association
Kenya	
	Ishtar-MSM
	Jinsiangu
	Maaygo
	Minority Womyn in Action
	National Gay and Lesbian Human Rights Commission (NGLHRC)
	Persons Marginalised and Aggrieved (PEMA)
Malawi	
	Centre for the Development of People (CEDEP)
South Africa	
	Durban Gay and Lesbian Community and Health Centre
	Gender Dynamix
	OUT LGBT Well-Being
	Triangle Project
Swaziland	
	The Rock of Hope
Zambia	
	Friends of Rainka
	Trans Bantu Zambia (TBZ)
	The Lotus Identity
Zimbabwe	
	Gays and Lesbians of Zimbabwe (GALZ)
	Sexual Rights Coalition (SRC)

Study design

Design of study aims

In October 2015, COC Netherlands held a consultative meeting with the community partner organisations and researchers from the Gender Health and Justice Research Unit (GHJRU) at the University of Cape Town. At that meeting, partner organisations identified the gaps in current research and knowledge on LGBTI people's health in the Southern and East African region. Additionally, the partner organisations, GHJRU researchers and COC discussed what study design would be best suited and discussed strategies for sampling and recruitment. These discussions identified a number of areas where more research was needed to better understand LGBTI health concerns. To address all of these areas was beyond the scope of this research project. We ranked all research needs that were identified and decided to focus on the top three: mental health and well-being, experiences of violence, and access to healthcare services.

Based on the discussions with the partner organisations, the GHJRU researchers drafted the study design. After all community partners, as well as COC Netherlands, provided feedback on our suggested study design, we finalised the study protocol and developed a survey questionnaire. Because there is currently little or even no research evidence on LGBTI people's mental health and well-being in our Southern and East African context, this project is an important opportunity to develop baseline data. For this reason, we developed a survey that could be used in all study countries, in order to compare findings across countries.

The survey

We reviewed national and international academic literature on how to measure mental health and well-being amongst LGBTI populations, specifically in Southern and East Africa. Based on these findings, we developed a draft for the survey we wanted to use in the study. We held two meetings with the community partner organisations and COC Netherlands to discuss the scope and wording of questions in the survey, and we revised the draft based on the feedback we received.

In each meeting, we held a group session to review the survey question by question and adjust the aims and wording of each section and question. As a team, we agreed to make small changes to standardised scales that measure mental health outcomes. While we wanted to create a single survey that could be used in all countries, in some instances we changed the wording of some of the questions for specific countries, so that participants would understand them better (for example, "apartment" versus "flat").

Once we had made all the suggested changes, we sent the survey to all community partner organisations and COC for a final round of feedback. Based on this last feedback, we finalised the survey.

Question design

All questions on the survey had categorical answers (answers that would organise participants into groups (categories), for example people who lived in Botswana, people who lived in Kenya, people who lived in South Africa, etc.). Only age, and number of cigarettes smoked per day were measured as continuous variables (information that can be measured on a scale or counted). For

many questions, we added an “Other, specify” option, so that participants could write or type additional/different information.

Socio-demographic measurement

We asked a number of questions to learn about participants’ socio-demographic circumstances. These included age, religion, education, housing, employment, race, and financial security (assessed by the question “On average do you have enough money to cover your basic needs?”). We created a variable to look at housing security, for which we asked participants if they owned their home, rented it, or shared a place with someone without paying rent. We classified participants who shared a place without financially contributing as ‘housing insecure’ because we hypothesised that they would be more vulnerable to being told to leave if their SOGIE was discovered by other people in the house. People who said they had no home, lived on the street, or lived in short-term accommodation (shelters) were also classified as housing insecure.

Measuring sexual orientation and gender identity

In public health literature, there is no recognised standard definition of sexual orientation or gender identity, nor is there consensus on how to measure them in quantitative studies. Sexual orientation is widely accepted as being comprised of three elements: sexual identity, sexual attraction, and sexual activity. A range of studies have used different combinations of these three elements to define participants’ sexual orientation (King *et al.*, 2008). In order to paint a nuanced picture of the participants’ sexual orientation, we aimed to assess each of these three elements.

1. **Sexual identity** was assessed by asking participants “In terms of your sexual orientation, how do you identify?” (Options: Lesbian, Bisexual, Gay, Heterosexual, Asexual, “Other, specify”)
2. **Attraction** was assessed by asking participants who they were sexually and emotionally attracted to (2 questions).
3. **Sexual activity** was assessed by asking participants about who they have had “sexual experiences with in the past year and their lifetime” (2 questions).

For attraction and sexual activity, the questionnaire gave participants a list of options from which they could select all that applied (Options: With women, with men, with trans women, with trans men, with gender non-conforming people, with intersex people, “I have not had sexual experiences”, “Other, specify”).

There is also no standardised way of asking participants about gender identity. We decided to combine three questions:

1. **Gender identity** was assessed by asking “In terms of your gender identity, how do you identify?” (Options: Woman, Man, Trans woman, Trans man, Gender non-conforming, “Other, specify”).
2. We asked about **sex assigned at birth** (Options: Male, Female, Intersex)
3. Additionally, we asked what sex/ gender was recorded in the participant’s identity document(s)

Based on participants' answers to these questions, we created categories for sexual orientation and gender identity. For sexual orientation, these were: lesbian, gay, bisexual, 'non-normative', and heterosexual. For gender identity, they were: cisgender women, cisgender men, transgender women, transgender men and gender non-conforming people. We use these categories to disaggregate the findings about experiences of violence and mental health outcomes. To create these categories, in some instances we had to re-code the way participants self-identified, based on the other information they provided in the questions about their sexuality and gender identity. The detailed algorithm for this re-coding is explained in Appendix 1.

Intersex participants

In our study, very few participants identified themselves as "intersex." Such small numbers make it difficult to draw statistical inferences about the data. For this reason, while the intersex participants are still included in the overall findings reported here, we do not disaggregate by intersex identity.

Measuring social support

We asked three questions about participants' social support: "Who do you go to when you need someone to talk to about problems in your life?", "Who in your life knows that you are LGBTI?", and "Of those, who have you told yourself about being LGBTI?" We combined the last two questions, to have an indicator of whether participants are 'out' in their social context.

Health-seeking behaviour and access to healthcare

We developed a number of general questions to ask about what kind of healthcare participants used, and where. Additionally, we adapted questions about experiences of discrimination in healthcare from other studies with LGBTI people (Bazargan and Galvan, 2012; Cruz, 2014; Calton, Cattaneo and Gebhard, 2015).

Measuring mental health and well-being

To measure depression and anxiety, as well as drug and alcohol use, we used internationally used and recommended scales. We chose scales that had been used in research on the African continent (specifically the countries in this study), and, if possible, that had been used in research with LGBTI people (anywhere in the world). However, there was little information about whether scales had been used with LGBTI populations (King *et al.*, 2008; Myer *et al.*, 2008; Chishinga *et al.*, 2011). We also considered the ease of understanding and potential ease of translation to other languages when choosing scales. Based on all these considerations, we used the following scales:

- The CES-D 10 (Center for the Epidemiological Studies of Depression Short Form) to measure depression. It is widely used to screen for signs of depression in primary care settings, and is often used for research on the prevalence of depression. It is important to keep in mind, however, that we cannot diagnose people using the CES-D 10. In order to receive a definitive diagnosis of clinical depression, an individual needs to see a healthcare provider.
- The Generalized Anxiety Disorder 7-item scale (GAD-7) to assess signs of anxiety that participants may have had in the last two weeks.
- The Alcohol Use Disorders Identification Test (AUDIT) to assess whether an participant's alcohol use is harmful.

- The Drug Use Disorders Identification Test (DUDIT) to assess if a participant's drug use is harmful.

To ask about suicide, we reviewed literature about LGBTI health to develop suicidality measures (Haas *et al.*, 2010; Marshall *et al.*, 2016).

In Appendix 1, we provide more detail on the scales and how we used the data we collected.

Measuring violence

We developed the questions that asked about experiences of violence based on the GHJRU's previous work in violence research. Additionally, we reviewed literature about intimate partner violence among LGBTI people (Calton, Cattaneo and Gebhard, 2015). We asked a series of "yes/no" questions about experiences with verbal harassment, emotional violence, physical violence ("Have you been physically assaulted?"), and sexual violence ("Have you been sexually assaulted?"). For physical and sexual violence, we asked about experiences in the last 12 months and in participants' lifetime. For participants who reported lifetime experiences of violence, we asked about three signs of post-traumatic stress based on the current *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) of the American Psychiatric Association. These are: flashbacks or nightmares reliving the event; avoiding situation/people reminding them of the violent incident; jumpiness, irritability or restlessness following the incident (American Psychiatric Association, 2013).

Translations

The survey was translated into the following languages: Amharic, Chichewa, isiNdebele, Sesotho, Setswana, Shona, Siswati and Swahili. These translations were done by professional translators, and then reviewed by the community partner organisations. The changes that the partner organisations suggested were discussed with the professional translator, and incorporated into the final translated versions.

Fieldworker training

Each community partner organisation had a designated research coordinator and a research assistant. These two were responsible for training and overseeing fieldworkers, who collected data by handing out surveys to participants. We (the GHJRU researchers) trained the research coordinators and assistants in a three day 'Train the trainer workshop'. The training included information on research processes, how to make decisions about study design and methodology, best practices in data collection, research ethics and participant protection, as well as discussions about data analysis and the use of data once the study is over. We wrote a fieldworker manual, so that research coordinators and assistants would have the information from the training on hand. When organisations decided to employ additional fieldworkers, they were trained by the research coordinator.

Who could participate in the survey?

Eligibility to participate in the survey was defined by age, sexual orientation, and gender identity.

- **Be of adult age:** all participants needed to self-identify as being age 18 or older
- **Self-identified as LGBTI:** Participants were required to either not identify as heterosexual (and therefore be a sexual minority/member of the LGBTI community) or not be cisgender (and therefore be a gender minority, for example, transgender). Included in gender minorities are people with diverse sex characteristics (or who identified as intersex). We asked participants to self-identify. In the informed consent statement, we gave the following categorisations or identities as prompts to help potential participants determine their eligibility: gay, lesbian, bisexual, transgender, transsexual, transman, transwoman, intersex, queer, genderqueer, gender non-conforming, pansexual, omnisexual, men who have sex with men (MSM), women who have sex with women (WSW), kuchu.

Our study did not use a comparison group—that is, we did not survey people who identify strictly as heterosexual and cisgender. While this limits our ability to compare our findings about sexual and gender minority people with heterosexual and cisgender people, we draw on research with the general population to discuss possible differences between LGBTI people and heterosexual, cisgender people.

Sampling methodology

We combined two sampling methods to find research participants: community-based sampling and online-based sampling. This means that partner organisations would find participants at their events, or during their outreach activities, and also disseminate a link to an online version of the survey. In Appendix 1, we discuss in more detail why we chose these methods.

Neither of these two sampling methods allow us to draw inferences beyond the constituency population, meaning we will not be able to make predictions about larger LGBTI populations across the country or region. The findings from our study are therefore not representative of all LGBTI people in the participating countries, although they do give us an indication of what some of the problems affecting LGBTI people in these contexts maybe.

Each partner organisation aimed to enrol 200 participants. The numbers of participants in each country were therefore determined by the number of partner organisations in that country. In total, we analysed data from 3,796 participants. Table 2 shows the number of participants in each country. In Appendix 1, you will find a more detailed breakdown by country and organisation.

TABLE 2: Number of participants, by country

Country	Number of participants
Botswana	618
Ethiopia	198
Kenya	976
Lesotho	173
Malawi	197
South Africa	832
eSwatini	103
Zambia	353
Zimbabwe	346
TOTAL	3,796

Collecting data

As part of the participatory design of this project, each partner organisation designed an individual plan for recruiting participants, based on the recruitment plan that we have explained above. Organisations used a range of methods, including: promotion of the online survey through a facebook advert, promoting the survey among people who came for services at their office, recruiting through personal and professional networks of the fieldworkers.

The partner organisations used a mix of self-administration and fieldworker-administration to collect the data. **Self-administration** meant that the participant read the survey to themselves and filled it out on their own. **Fieldworker-administration** meant that a fieldworker read the questions to the participant.

Because questions about mental health, violence and experiences of discrimination might bring up traumatic memories or distress to people, all participants had access to psychosocial support, both during the data collection process and afterwards. In some organisations, this was provided by counsellors within the organisations, in others, through referrals to LGBTI-affirming counsellors outside of the organisation. All fieldwork teams held regular debriefing sessions for the fieldworkers, who also had access to the same psychosocial support services.

Pilot study

Before finalising the questionnaire, we conducted a pilot study in South Africa, the first country to implement data collection. The purpose of the pilot was to identify questions that should be added or removed, rephrased, or otherwise adjusted. The pilot study showed us a few questions that we needed to change in order to make the survey as easy to understand as possible. Once we made these changes, the questionnaire was considered final. We made no more changes to it during the study.

Analysing data

We entered all survey data into an online database called REDCap, an electronic data management system by Vanderbilt University, and then analysed it with the software Stata15. We ran descriptive statistics and measured associations between differences that we found among the participants in our sample. Where data was missing because participants had not answered a question, we used a method called ‘multiple imputation’.

For many key outcomes in this report, we report statistics for subgroups of the overall sample. We use this approach to highlight times when specific subgroups may be particularly vulnerable due to historical and persistent socio-economic disparities and oppression. However, we could only do this in countries where the size of the overall sample and subgroup were large enough to examine meaningfully.

Appendix 1 has more detailed information on our data analysis.

Research approvals and regulatory compliance

The study was approved by the University of Cape Town’s Faculty of Health Sciences Human Research Ethics Committee. Additionally, it was approved by national ethics or health regulatory bodies in each country (Table 3). In accordance with the guidelines for research on sexual and gender minorities’ health in rights-constrained environments and established best practices (amfAR, 2015; Amon *et al.*, 2012), in countries where obtaining regulatory approval would have significantly increased risks for our community partner organisations and/or research participants, we constituted a review board of community members to evaluate the risks and benefit of the study. This was overseen and approved by the University of Cape Town’s Faculty of Health Sciences Human Research Ethics Committee. We only enrolled participants who provided informed consent.

TABLE 3: Research approvals

Country	Approval authority	Reference number
Botswana	Review Board, Office of Research and Development, University of Botswana Ministry of Health and Wellness, Republic of Botswana	UBR/RES/IRB/ BIO/009 HPDME: 13/18/1
Ethiopia	Approval through community review board	-
Kenya	Kenya Medical Research Institute	KEMRI/RES/7/3/1
Lesotho	Research and Ethics Committee, Ministry of Health, Lesotho	ID94-2017
Malawi	University of Malawi, College of Medicine Research and Ethics Committee	P.01/18/2330
South Africa	University of Cape Town Faculty of Health Sciences Human Ethics Research Committee	HREC 012/2016
eSwatini	Scientific and Ethics Committee, Ministry of Health and Social Welfare, Kingdom of Swaziland	no reference number
Zambia	Approval through community review board	-
Zimbabwe	Medical Research Council of Zimbabwe	MRCZ/A/2303



FINDINGS IN SOUTH AFRICA

Sexual orientation, gender identity and expression in South Africa

South Africa's Constitutional and legislative framework offers comprehensive recognition and legal protection to LGBT people and is among the most progressive globally. The Constitution provides that the state is obliged to "respect, protect, promote and fulfil" the rights enshrined in the Bill of Rights.⁴ Central to the Bill of Rights is the Equality Clause in Section 9(3), which mandates that nobody may be discriminated against based on, among other grounds, their sex, gender or sexual orientation. Section 10 guarantees that everyone has inherent dignity and the right to have their dignity respected and protected. Further rights enumerated in the Bill of Rights include the right to life (Section 11), as well as the right to security of the person, including the right "to be free from all forms of violence from either public or private sources," the right "to security in and control over their body," the right "not to be treated or punished in a cruel, inhuman or degrading way" (Section 12), as well as the right to access to healthcare (Section 27).

Emanating from this constitutional mandate, LGBT people ought to enjoy the full range of civil rights. Legislative and policy reforms, as well as the development of equality jurisprudence after 1996 have sought to remove or amend any law that criminalizes or discriminates on the basis of sexual orientation.

These constitutional commitments and legal reforms exist amidst staunchly conservative societal attitudes, which manifest in social exclusion, discrimination and violence in the daily lives of LGBTI people, including in healthcare (see, for example, Rispel *et al.*, 2011; Matebeni *et al.*, 2013; Smith, 2014; OUT LGBT Well-being, 2016; Meer and Müller, 2017; Müller, 2017). This contributes to sexual orientation-specific health disparities, for which we currently have evidence on HIV infections and levels of violence (Lane *et al.*, 2011; Sandfort *et al.*, 2013; OUT LGBT Well-being, 2016a). There are stark disparities between an under-resourced and over-burdened public health system and a private health system that is largely inaccessible due to low health insurance coverage. Most South Africans use the public healthcare system, although marginalisation based on race, class and rural location impede access (Mayosi and Benatar, 2014), and likely exacerbate the exclusion based on sexual orientation and gender identity-related discrimination experienced by LGBT people.

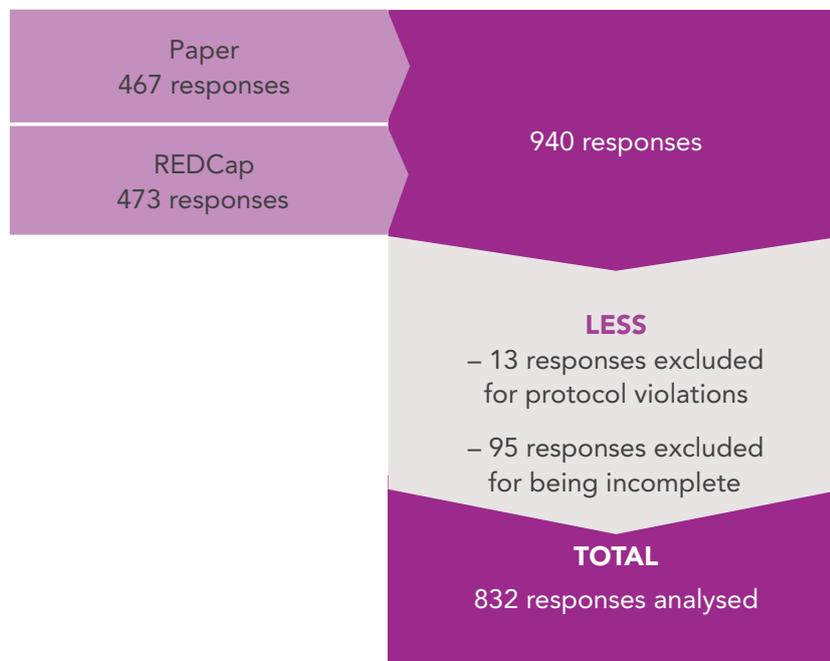
4 Constitution of South Africa (1996), Article 7(2).

The study population: sample characteristics

In South Africa, we collected survey data both on paper and online, through REDCap, an electronic data management system. Participants filled out surveys by themselves (self-administration) or with the assistance of a fieldworker (fieldworker-administration).

On paper, a total of 467 surveys were filled out through four partner organisations (including the 72 pilot surveys). An additional 473 South African surveys were collected through REDCap. Of these 940 responses, 13 violated the research protocol (protocol violations) because they either did not document informed consent or the respondent was not eligible (for example not 18 years old or older). Surveys with these violations were excluded from our final sample for analysis. Some participants began the survey but did not completely fill it out. We decided to exclude anyone who did not reach the 'outcomes' section of the survey. For this reason, an additional 95 participants were excluded from the sample, leaving a final sample of 832 participants for analysis (Figure 1).

FIGURE 1: South African participant sample



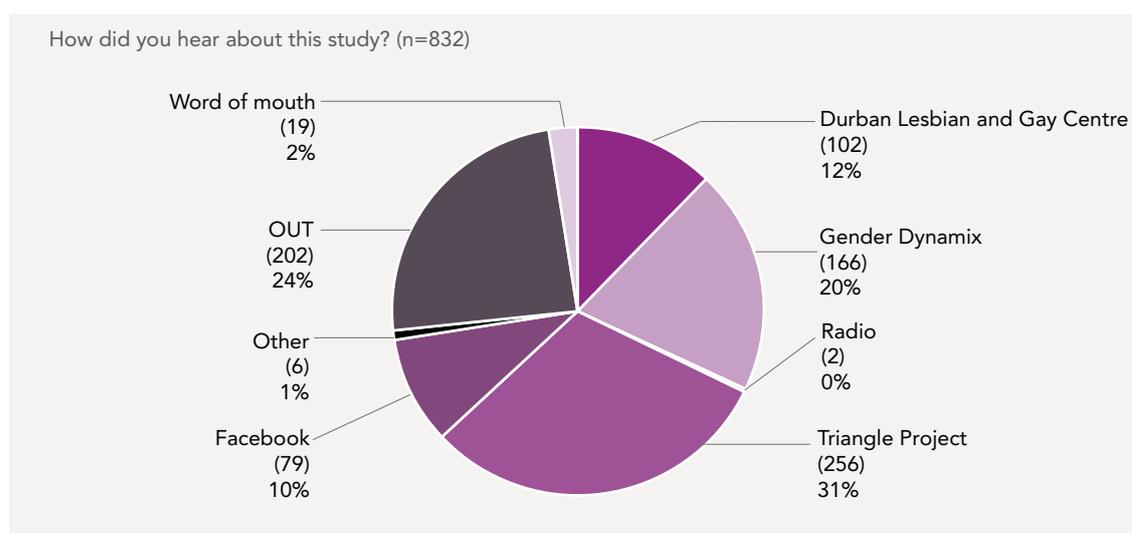
We do not report on the number of participants who were approached for participate but who declined or were ineligible. These participants did not fill out the survey.

We therefore analysed 832 participant responses from South Africa. Of these, 610 (74%) filled out the survey on their own, and 217 (26%) filled it out with the help of a fieldworker. Fifty-five percent of the surveys were answered on paper and 45% were answered on REDCap (454 and 378 of 832, respectively). When REDCap was used, this was sometimes with a fieldworker using a tablet for data collection and sometimes through online recruitment where participants filled out the survey themselves by accessing the survey website. Different methods of data collection were used by different partner organisations (Table 4). As the link to the survey on REDCap was shared on Facebook and other social media, not all REDCap responses could be linked to a partner organisation (Table 4).

TABLE 4: Methods of data collection among South African partner organisations

Partner organisation	Paper, fieldworker-administered		Paper, self-administered		REDCap, fieldworker-administered		REDCap, self-administered		TOTAL
	n	%	n	%	n	%	n	%	
Durban Gay and Lesbian Community and Health Centre	3	2.97	95	94.06	0	0.00	3	2.97	101
Triangle Project	6	2.34	38	14.84	2	0.78	210	82.03	256
OUT LGBT Well-Being	158	79.40	34	17.09	0	0.00	7	3.52	199
Gender Dynamix	26	15.76	89	53.94	22	13.33	28	16.97	165
Other	0	0.00	0	0.00	0	0.00	106	100.00	106

FIGURE 2: Data collection by partner organisation



Sociodemographic characteristics

Table 5 shows detailed information about participants' demographics (characteristics of the sample). The median age was 27 years (interquartile range⁵ 23 to 33), with the youngest participant being 18 years old, and the oldest 63 years old. Almost one third of participants lived in peri-urban areas (urban outskirts) (246 participants, 30%), 60% lived in an urban area (491), and 10% lived in a rural area (83). Half of participants listed Christianity as their faith (415), and one third said they were not religious (269).

Half of participants identified as Black (415 of 828), 19% as Coloured (157), 27% as White (220),

5 Also known as the 'middle 50%'—meaning that 50% of South African participants were age 23 to 33, 25% were under age 23, and 25% were over age 33.

2% as Indian (18) and 2% identified their race as 'other' (18). Whilst there are distinctions between Black, Coloured and Indian participants, we decided to analyse data for all three groups together, to reflect the historical legacy of apartheid and its effect on mental health vulnerability based on race. Throughout the report, we compare participants who identify as White with participants who identify as Black, Coloured or Indian. Every instance of the term 'Black' throughout the rest of this report thus refers to the Black, Coloured and Indian South Africans in our sample, as well as everybody who identified in the 'other' category.

TABLE 5: Sociodemographic characteristics

	n	%
Age group	(n=816)	
18-24	281	34.44
25-34	369	45.22
35-44	128	15.69
45-54	31	3.80
55-64	7	0.86
Race	(n=828)	
Black	415	50.12
White	220	26.57
Indian	18	2.17
Coloured	157	18.96
Other	18	2.17
What type of area do you live in?	(n=820)	
Urban	491	59.88
Semi-urban/Peri-urban	246	30.00
Rural	83	10.12
Religious beliefs*	(n=830)	
African tradition	80	9.64
Islam	24	2.89
Christianity	415	50.00
Rastafarianism	2	0.24
Judaism	8	0.96
Not religious	269	32.41
Other, specify	44	5.30

*More than one answer possible

Sexual and gender diversity / sexual orientation and gender identity

Every participant in this study was a sexual minority and/or gender minority—because only people who identified as lesbian, gay, bisexual or any other non-heterosexual sexual orientation (sexual minorities), and/ or people who identified as transgender, gender queer, non-binary or any other non-cisgender gender identity (gender minorities) were allowed to participate in the survey. To determine participants’ specific sexual orientations and gender identities, we asked a range of questions on sexual and emotional attraction, sexual behaviour, sexual identity, gender identity, sex classification at birth and legally assigned sex/gender. Participants’ responses reflect the vast diversity of sexual and gender identity. We consider the diverse range of responses to these questions to be an important finding in itself, which highlights the diversity and complexity of sexual orientations and gender identities.

We first examined participants’ self-identification of their sexual orientation and gender identity (Table 6).

TABLE 6: Participants’ self-identification of sexual orientation and gender identity

Participant self-identified sexual orientation	Participant self-identified gender identity							
	Woman	Man	Trans woman	Trans man	Gender non-conforming (GNC)	Other	Missing data	Total
Lesbian	163	10	6	5	12	3	1	200
Bisexual	53	59	5	4	5	0	1	127
Gay	8	283	18	4	9	2	2	326
Heterosexual	6	10	40	11	3	0	0	70
Asexual	1	1	4	1	4	2	0	13
Queer	10	1	2	4	8	4	0	29
Pansexual	9	1	3	4	9	2	0	28
‘Transgender’	2	1	8	5	1	1	0	18
Other	10	2	0	1	2	5	0	16
Missing data	0	0	0	0	0	0	1	1
Total	262	368	86	39	53	19	5	832

Table 6 describes how participants responded when asked how they identify their sexual orientation and gender identity, and therefore describes ‘self-identification.’ These are the terms that participants chose as most fitting to describe their sexual orientation and gender identity.

It should be noted that in Table 6, we did not categorise participants based on same-sex sexual experiences or the sex they were assigned at birth. Thus, Table 6 reflects only how people self-identified, and does not take into account, for example, people who identify as heterosexual but have had same sex/gender sexual relations, or who identify as man or woman, but were assigned

a different sex at birth. We added the categories queer, pansexual, and 'transgender' because they were common responses under the category of other. A total of 18 participants wrote in that they identify their *sexual orientation* as 'transgender' (16 participants) or 'genderqueer' (2 participants), which are widely understood to be gender identities. We have illustrated this mismatch by listing 'transgender' within quotation marks in the list of sexual orientations.

Throughout this report, we use categories of sexual orientation (lesbian, gay and bisexual) and gender identity (cisgender women, cisgender men, transgender women, transgender men and gender non-conforming people) to examine experiences of violence and mental health outcomes. To create these categories, we in some instances re-coded the way participants self-identified. This was to consider the additional information provided by other items in the survey. We describe the process of re-coding in the section 'Measuring sexual orientation and gender identity' in the previous section of this report.

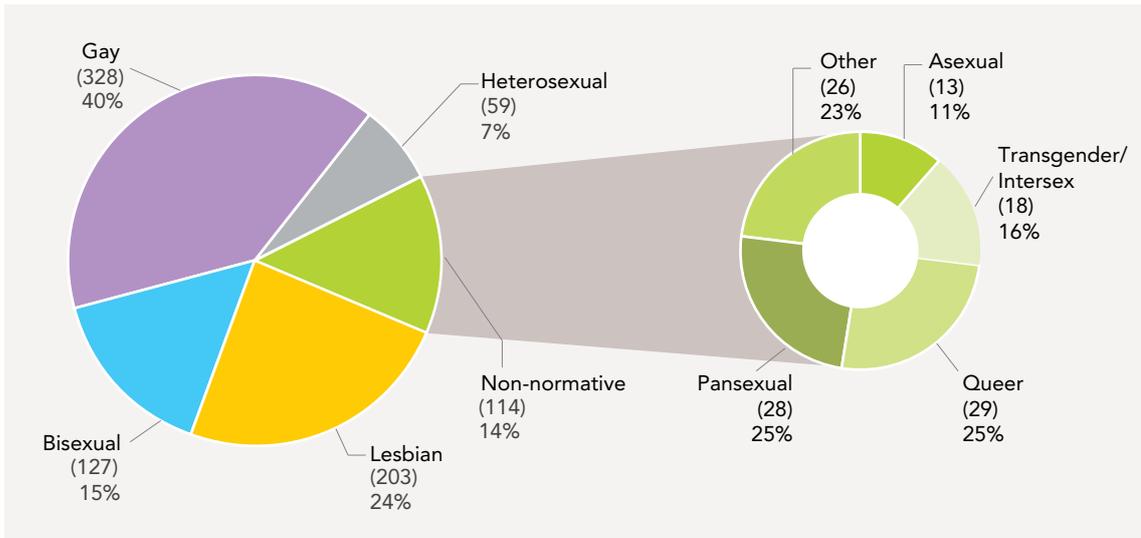
Sexual minorities

We considered anyone who did not identify as heterosexual to be a sexual minority (see Table 6 and Figure 3), as well as anyone who had not had sex in the past year but was exclusively sexually attracted to people of the same sex/gender or had had sexual experiences exclusively with a partner or partners of the same sex or gender in the past year, even if they self-identified as heterosexual ($n=11$, 1%). In the existing HIV literature, these participants are referred to as 'men who have sex with men' (MSM), or 'women who have sex with women' (WSW) (Young and Meyer, 2005; Baral *et al.*, 2009). We decided to use the term sexual minority and not MSM or WSW for two reasons: (1) MSM and WSW are used in research on sexual behaviour and sexual health, and have been criticised for focusing too much on the sexual behaviour of people, while neglecting their relationships, communities and social networks; (2) the alternative term 'sexual minority' highlights people's social marginalisation due to non-normative sexual orientation or sexual practice. Given that our research is about people's mental health and well-being, and does not ask about sexual behaviour or sexual health, 'sexual minority' is more appropriate to highlight the effect of minority status on mental health, well-being, vulnerability to violence and marginalisation in healthcare.

In total, 754 participants (93%) were sexual minorities.

Figure 3 displays participants' sexual orientations. Participants who were classified as gay, lesbian and bisexual made up the majority of the sample. Twenty-one per cent of participants had identified as a range of other sexual orientations (for example as queer, heterosexual, or asexual). However, the number of responses within some of these individual sexual orientation categories was too small to be statistically representative (for example there were only 22 people who identified as pansexual), so we could not analyse them in their individual groups. Figure 3 also breaks down the composition of the 'non-normative' sexual orientation category. Anyone who listed two or more sexual orientations, 'demisexual', or 'omnisexual' was recorded under 'non-normative'. This 'non-normative' category is very heterogeneous (full of different identities).

FIGURE 3: Participants' sexual orientations



Gender minorities

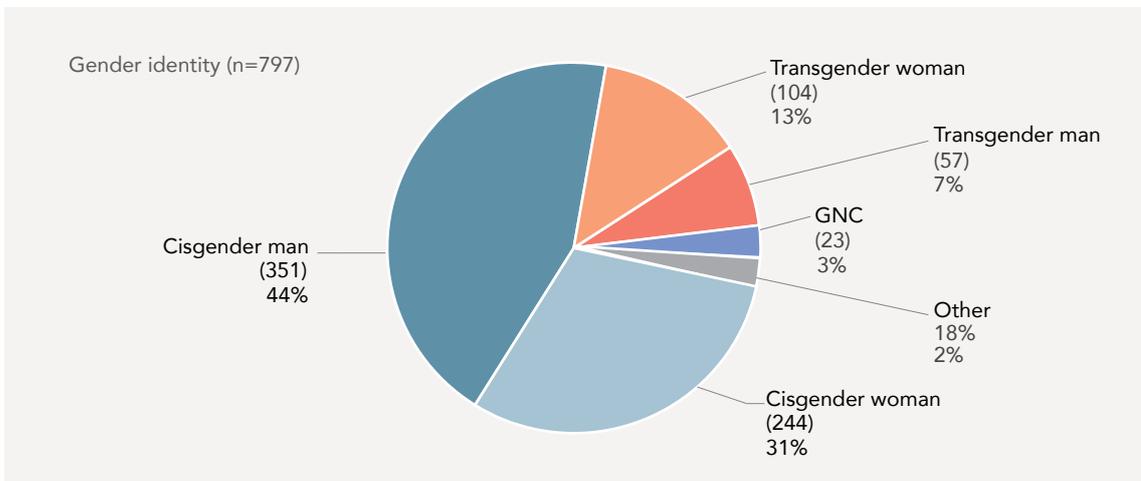
In order to identify gender minority participants, we asked two questions: How did participants self-identify their gender identity (see Table 6), and what sex was assigned to participants at birth. Based on these parameters, we defined gender minority participants as:

4. those who self-identified as transgender women, transgender men, gender non-conforming (GNC) or other; and
5. those whose gender identity was different from the sex assigned to them at birth (37, 4%).

In total, 232 participants (28%) were gender minorities.

For this report, we considered those whose reported gender identity was different from the sex assigned to them at birth to be transgender women and men, as appropriate. Figure 4 displays participants' gender identities.

FIGURE 4: Participants' gender identity



The following responses were recorded under 'other': anyone who listed two gender identities, intersex, non-binary, genderqueer, agender, gender fluid, queer, demigirl, 'any gender', butch, demi-boi, and 'I do not recognise gender as an identifying characteristic.' For the same reasons that we did not analyse the 'other' group of participants' sexual orientations (see the previous section), we did not analyse the group of 'other' gender identities on its own. For more information about how we recorded sexual orientation and gender identity, see 'Sexual orientation and gender identity measurement' in the Methods of this report.

Socioeconomic circumstances

Table 7 details participants' socioeconomic status. For many key outcomes in this report, we report statistics for Black (including participants identifying as Black, Coloured and Indian) and gender minority participants as subgroups of the overall sample. We use this approach to highlight times when Black and gender minority LGBTI people, in comparison to White and cisgender LGBTI people, may be particularly vulnerable due to historical and persistent socio-economic disparities. [Table 7: Social and financial capital, by race and gender identity](#)

Overall sample (n=832)			Black participants † (n=608)			Gender minority^ participants (n=232)		
	n	%	n	%	p	n	%	p
Housing type	(n=830)		(n=607)			(n=232)		
Categorical					<0.001**			<0.001**
House	504	60.72	389	64.09		131	56.47	
Apartment/flat/ garden cottage	242	29.16	139	22.90		55	23.71	
Shanty/shack	39	4.70	39	6.43		12	5.17	
Hotel	3	0.36	2	0.33		1	0.43	
Mobile house	5	0.60	4	0.66		2	0.86	
On the street	37	4.46	34	5.60		31	13.36	
Binary					<0.001**			<0.001**
Informal/homeless	84	10.12	79	13.01		46	19.83	
Formal	746	89.88	528	86.99		186	80.17	
Housing security	(n=787)		(n=568)		<0.001**	(n=198)		0.060
Owens home	122	15.50	69	12.15		22	11.11	
Rents home	299	37.99	183	32.22		72	36.36	
Shares housing without paying	366	46.51	316	55.63		104	52.53	

	Overall sample (n=832)		Black participants † (n=608)			Gender minority^ participants (n=232)		
	n	%	n	%	p	n	%	p
Highest completed level of education	(n=828)		(n=605)		<0.001**	(n=231)		<0.001**
No formal education	9	1.09	8	1.32		4	1.73	
Primary education	32	3.86	31	5.12		21	9.09	
Secondary school (matric)	386	46.62	317	52.40		113	48.92	
Post-secondary school/ University diploma or degree	401	48.43	249	41.16		93	40.26	

	(n=823)		(n=601)		<0.001**	(n=230)		0.002**
Employment	(n=823)		(n=601)		<0.001**	(n=230)		0.002**
No employment	318	38.64	279	46.42		97	42.17	
Formal employment	357	43.38	228	37.94		79	34.35	
Informal employment	148	17.98	94	15.64		54	23.48	

	(n=810)		(n=588)		<0.001**	(n=229)		<0.001**
Sufficient money for basic needs	(n=810)		(n=588)		<0.001**	(n=229)		<0.001**
No	311	38.40	285	48.47		113	49.34	
Yes	499	61.60	303	51.53		116	50.66	

	(n=804)		(n=581)		<0.001**	(n=224)		<0.001**
Has medical aid	(n=804)		(n=581)		<0.001**	(n=224)		<0.001**
No	482	59.95	412	70.91		156	69.64	<0.001**
Yes	322	40.05	169	29.09		68	30.36	

† Black refers to all participants who identified as 'Black', 'Coloured', 'Indian' and 'other'; ^Gender minority participants are participants who identify as transgender, gender non-conforming or 'other' gender identities; **Chi square/Fisher's exact test p-value significant, at p<0.05

Ninety percent of participants lived in housing or apartments (formal, stable housing structures; 746 participants). Of the other 10%, 47 (6%) lived in shacks, hotels, or mobile houses (informal, unstable, or transient housing), and 37 (4%) lived on the street. Of the 37 participants living on the street, 34 were Black, and 31 were gender minority. There was a statistically significant difference (p<0.05) between formal and informal housing between Black and White participants and gender minority and cisgender participants, suggesting that Black and gender minority participants are less likely to have access to secure housing. Of concern is that more than one in ten of all gender minority participants reported living on the street, which highlights both the level of social exclusion of gender minority people, and the resulting precariousness of their lives.

The sample was more diverse, in respect of participants' housing security: one third of participants rented (299 of 787 participants), almost half of participants lived in shared housing without paying rent (for example with family or friends; 366 of 787) and 16% of participants owned their own home (122 of 787).

Levels of education were reported as high in the overall sample: 95% had passed matric (787 participants), and almost half of all participants had completed a post-secondary educational degree (for example, a tertiary degree or a post-secondary diploma; 401, 48%). Education levels were lower for Black participants and gender minority participants than for the sample as a whole. These differences are statistically significant, as demonstrated by the p-values.

Many participants were in financially precarious situations: more than one third did not have a paid job (318 of 823 participants), and another 18% (149 of 823) held informal jobs, without contracts. Further, only 60% (499 of 810) said they had enough money to cover their basic needs. This percentage fell to 52% and 51%, for Black participants and gender minority participants, respectively.

Forty percent of participants had private medical aid or health insurance. This percentage is high compared to the general South African population, in which only 17% of people have medical aid. However, there are known disparities in medical aid coverage in South Africa based on race: 72% of White South Africans have medical aid, whereas only 11% of Black African people have the same coverage (Statistics South Africa, 2017a). The overrepresentation of White people in our sample may account for the overall high medical aid coverage: Black participants (29%) and gender minority participants (30%) were less likely to have private medical aid or health insurance than their white and cisgender counterparts (69% and 44%, respectively; both $p < 0.05$).

Social support and being 'out'

To measure social support, we asked participants who they go to when they need to talk about life problems. We also asked who in their life knows about their sexual orientation and gender identity as a way of quantifying how 'out' they are. A description of these responses is in Table 8.

TABLE 8: Social support and being 'out'

	Overall sample (n=832)		Black participants † (n=608)			Gender minority^ participants (n=232)		
	n	%	n	%	p	n	%	p
Who they go to for support	(n=772)		(n=572)				(n=217)	
Current partner(s)	341	44.17	245	42.83	0.170	86	39.63	0.100
Family member(s)	347	44.95	266	46.50	0.132	91	41.94	0.287
Friend(s)	580	75.13	434	75.87	0.415	151	69.59	0.031**
Person/people living with	142	18.39	110	19.32	0.366	48	22.12	0.093
Healthcare provider(s)	115	14.90	67	11.71	<0.001**	43	19.82	0.019**
Co-worker(s)	98	12.69	84	14.69	0.003	31	14.29	0.391
Person/people living nearby	102	13.21	98	17.13	<0.001**	17	7.83	0.007**
LGBTI organisations	116	15.03	105	18.36	<0.001**	51	23.50	<0.001**

Who knows their sexual orientation and/or gender identity	(n=772)		(n=572)			(n=217)		
	n	%	n	%	p	n	%	p
Current partner(s)	504	65.28	371	64.86	0.616	125	57.60	0.006**
Family member(s)	619	80.18	450	78.67	0.047**	179	82.49	0.341
Friend(s)	708	91.71	518	90.56	0.033**	192	88.48	0.046**
Person/people living with	465	60.23	338	59.09	0.199	137	63.13	0.325
Healthcare provider(s)	346	44.82	223	38.99	<0.001**	115	53.00	0.006**
Co-worker(s)	371	48.06	235	41.08	<0.001**	109	50.23	0.517
Person/people living nearby	372	48.19	287	50.17	0.077	88	40.55	0.007**
LGBTI organisations	340	44.04	256	44.76	0.404	124	57.14	<0.001**

† Black refers to all participants who identified as 'Black', 'Coloured', 'Indian' and 'other'; ^ Gender minority participants are participants who identify as transgender, gender non-conforming or 'other' gender identities; **Chi square/Fisher's exact test p-value significant, at p<0.05

Overall, participants reported having the most social support from friends and were out to friends more than other people in their lives. Black participants were less likely to be out to their friends (91%), family (79%) and co-workers (41%) than White participants (95%, 85% and 69%, respectively; all p<0.05). Differences in being out to co-workers could be in part due to the lower employment rate among Black participants.

Gender minority people were more likely to report being out to LGBTI organisations (57%) and using LGBTI organisations for social support (24%) than their cisgender counterparts (39% and 11%, respectively; both $p < 0.05$), suggesting LGBTI organisations are a particularly important resource for gender minority people in South Africa. Further, gender minority participants were more likely to report support from healthcare providers (20% versus 13% of cisgender participants; $p < 0.05$), which may reflect use of gender affirming treatment and resulting open communication about gender identity with healthcare providers.

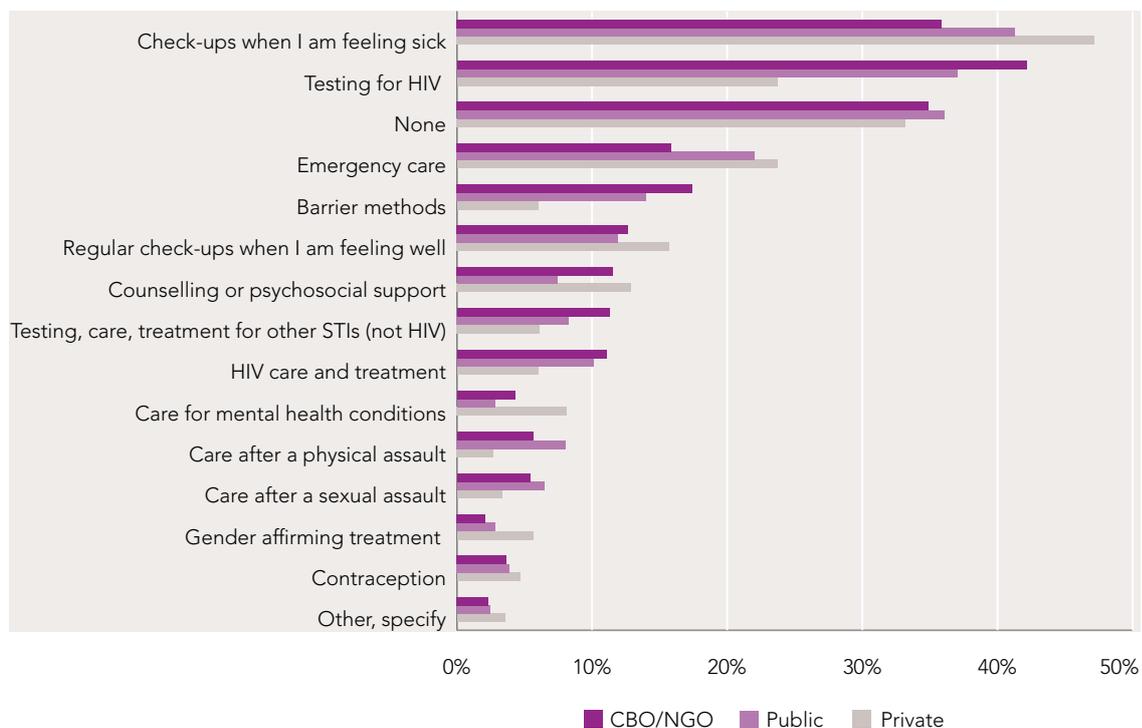
Health-seeking behaviour

We asked participants what health services they had sought in the previous year, and where they had gone for these services. Forty percent of participants (322 of 804) had private health insurance.

Figure 5 shows health services, in the order of most accessed in the previous year to least accessed, as well as what kind of provider was used – NGOs (in blue), public healthcare facilities (in orange) or private health care facilities (in grey). Overall, participants had most often gone to a health service for HIV voluntary testing and counselling (HIV VCT), or for a check-up when they were feeling sick. NGOs were the main point of access for participants who accessed sexual health related services (sexually transmitted infection (STI) testing or care, HIV testing and treatment, barrier methods) – more participants went to NGOs for these services than to public or private healthcare.

Notably, the next largest group of responses were from those who had not accessed any health service in the last year.

FIGURE 5: Health-seeking behaviour in previous year ⁶



6 HCT stands for HIV care and treatment

Gender affirming practices

In addition to asking all participants about their general health-seeking behaviour, we also asked gender minority participants about their access to, and use of gender affirming practices. Participants' gender affirming practices are shown in Table 9. These findings are important because gender affirming practices such as binding⁷ are proven to support people's gender identity and expression, reduce psychological distress and increase their safety in public (Manderson 2012, Ekins and King 2006, Cole and Han 2011). However, some gender affirming practices also might have health implications (Peitzmeier et al. 2017). It is therefore important for NGOs and healthcare providers to know about the risks of gender affirming practices and to discuss them with people who want to use gender affirming practices, so that they can make informed choices and learn how to reduce these risks. Of those assigned female at birth, half (50%) used binders, and more than two third (70%) of those assigned male at birth tucked. More than one in four gender minority participants (28%) used hormones for gender affirmation.

TABLE 9: Gender affirming practices

Gender minority participants (n=232)		
	n	%
Binding (gender minorities assigned female at birth, n= 230)	49	50.00
Tucking (gender minorities assigned male at birth, n= 129)	91	70.54
Hormones (all gender minorities, n= 231)	64	27.95

Participants were significantly more likely to report using hormones if they had medical aid or health insurance ($p < 0.05$).

Access to gender-affirming care impacts the level of hormone use among gender minority participants. Therefore, Table 9 may not reflect the number of participants who want and need to use hormones but cannot access them. We asked participants who identified as transgender or gender non-conforming whether they had access to hormonal and surgical gender affirmation procedures (regardless of whether or not they wanted to actually make use of these). Table 10 shows that just over half of gender minority participants had access to hormone treatment, and just over one third had access to surgical procedures.

TABLE 10: Access to gender affirming care

Access to gender-affirming care for gender minority participants (n=232)		
	n	%
Access to hormones (n=200)	113	56.50
Access to surgical procedures (n=199)	76	38.19

⁷ Binding is a technique to flatten one's breast or chest by using constrictive materials and clothing. Tucking is a technique to hide the bulge of male genitalia so that they are not conspicuous through clothing.

Discrimination in healthcare

We also asked participants about experiences of discrimination in health facilities, and how such experiences might have impacted their health-seeking behaviour. We examined experiences of discrimination or fear of discrimination, by race and gender identity. Table 11 describes these differences by these categories.

TABLE 11: Healthcare access and discrimination

	Overall sample (n=832)		Black [†] participants (n=608)			Gender minority [^] participants (n=232)		
	n	%	n	%	p	n	%	p
Disclosed SOGIE to healthcare provider	(n=814)		(n=598)				(n=228)	
Yes	517	63.51	358	59.87	<0.001**	169	74.12	<0.001*
Has tried to hide SOGIE-related health concern from healthcare provider	(n=805)		(n=572)				(n=222)	
Yes	357	44.35	210	36.71	0.262	108	48.65	<0.001*
Have you been treated with less respect because of your SOGIE?	(n=813)		(n=596)				(n=228)	
Categorical					0.212			<0.001*
Never	374	46.00	274	45.97		62	27.19	
Rarely	179	22.02	122	20.47		45	19.74	
Sometimes	202	24.85	156	26.17		83	36.40	
Often	58	7.13	44	7.38		38	16.67	
Binary					0.899			<0.001*
No (Never)	374	46.00	274	45.97		62	27.19	
Yes (Rarely/ Sometimes/ Often)	439	54.00	322	54.03		166	72.81	

	Overall sample (n=832)		Black [†] participants (n=608)			Gender minority [^] participants (n=232)		
	n	%	n	%	p	n	%	p
Have you been called names or insulted in a health facility because of your SOGIE?	(n=813)		(n=597)				(n=228)	
Categorical					<0.001**			<0.001*
Never	564	69.37	385	64.49		119	52.19	
Rarely	92	11.32	73	12.23		29	12.72	
Sometimes	117	14.39	105	17.59		54	23.68	
Often	40	4.92	34	5.70		26	11.40	
Binary					<0.001**			<0.001*
No (Never)	564	69.37	385	64.49		119	52.19	
Yes (Rarely/Sometimes/Often)	249	30.63	212	35.51		109	47.81	

Have you been denied healthcare because of your SOGIE?	(n=812)		(n=596)				(n=229)	
Categorical					0.035**			<0.001*
Never	631	77.71	449	75.34		138	60.79	
Rarely	78	9.61	60	10.07		26	11.45	
Sometimes	73	8.99	62	10.40		39	17.18	
Often	30	3.69	25	4.19		24	10.57	
Binary					0.006**			<0.001*
No (Never)	631	77.71	449	75.34		138	60.79	
Yes (Rarely/Sometimes/Often)	181	22.29	147	24.66		89	39.21	

[†] Black refers to all participants who identified as 'Black', 'Coloured', 'Indian' and 'other'; [^] Gender minority participants are participants who identify as transgender, gender non-conforming or 'other' gender identities; *Chi square/Fisher's exact test p-value significant, at p<0.05; SOGIE: Sexual orientation and gender identity and expression.

Sixty-four percent of participants (517 of 814) had told a healthcare provider about their sexual orientation and/ or gender identity. Overall, the majority of participants had not been denied healthcare or called names or insulted due to their sexual orientation or gender identity. However, almost a quarter of participants had been denied healthcare and 31% reported being called names or being insulted by healthcare staff at some point. Participants' sexual orientation and gender identity also directly influenced healthcare, as 44% of all participants, and just over half of gender

minority participants, reported trying to hide a health concern related to their sexual orientation or gender identity from a healthcare provider. Importantly, gender minority participants had significantly more experiences of discrimination, including denial of care, compared to cisgender participants.

These findings provide quantitative evidence to support qualitative findings that South African sexual and gender minority people experience discrimination in health facilities (Müller, 2016, 2017b; Meer and Müller, 2017b), which is often due to healthcare providers' lack of knowledge (Müller, 2013), conservative morals and values (Müller *et al.*, 2016), and little or no policy guidance on sexual and gender minority health (Spencer, Meer and Müller, 2017). The findings also highlight how widespread previous qualitative findings are, which have shown that sexual and gender minority people hide their sexual orientation and/ or gender identity, or delay seeking healthcare in order to avoid discriminatory treatment (Müller, 2018).

Experiences of violence

We asked participants about their experiences of violence, including verbal harassment related to participants' sexual orientation and gender identity or expression (SOGIE) and experiences of physical violence, sexual violence and domestic violence. We asked about experiences of violence in the previous year, as well as at any point in participants' lifetime. Table 12 shows the findings for participant overall, and for Black participants, and for gender minority participants. Participants reported high levels of physical, sexual and domestic violence, and gender minority and black participants experienced higher levels of violence in the past year than their white or cisgender counterparts.

Past research across the world has shown that LGBTI people are vulnerable to violence. In summary, our findings confirm other South African research evidence that shows that LGBTI people are vulnerable to violence, particularly sexual violence, due to their real or perceived sexual orientation or gender identity (Nel and Judge, 2008; Mkhize *et al.*, 2010; Matebeni *et al.*, 2013b; Sandfort, Frazer, Matebeni, Reddy and Southey-Swartz, 2015; OUT LGBT Well-being, 2016b). Vulnerability to violence is high across the different sexual orientations and gender identities grouped within sexual and gender minority identities.

Our findings also confirm that there are factors beyond sexual orientation and gender identity that increase LGBTI people's vulnerability to violence. Nel and Judge (2008) found that verbal, physical, and sexual violence levels experienced by black lesbian women and black gay men were notably higher than among white lesbian women and white gay men in South Africa. In our study, black participants had also experienced slightly higher levels of all forms of violence, compared to white participants, although these differences were not always statistically significant.

TABLE 12: Harassment and violence, overall sample and by race and gender identity

	Overall sample (n=832)		Black [†] participants (n=608)			Gender minority [^] participants (n=232)		
	n	%	n	%	p	n	%	p
SOGIE-related verbal harassment								
Experienced in lifetime	(n=766)		(n=570)				(n=215)	
	558	72.85	412	72.28	0.554	170	79.07	0.017*
Experienced in past year	(n=724)		(n=528)				(n=202)	
	294	40.61	223	42.43	0.163	113	55.94	<0.001*
Sexual violence								
Experienced in lifetime	(n=762)		(n=566)				(n=214)	
	365	47.90	273	48.23	0.841	133	62.15	<0.001*
Experienced in past year	(n=755)		(n=559)				(n=211)	
	140	18.54	122	21.82	<0.001**	61	28.91	<0.001*
Physical violence								
Experienced in lifetime	(n=760)		(n=564)				(n=214)	
	418	55.00	322	57.09	0.067	131	61.21	0.042*
Experienced in past year	(n=752)		(n=556)				(n=211)	
	152	20.21	130	23.38	<0.001**	57	27.01	0.005*

[†] Black refers to all participants who identified as 'Black', 'Coloured', 'Indian' and 'other'; [^] Gender minority participants are participants who identify as transgender, gender non-conforming or 'other' gender identities; *Chi square/Fisher's exact test p-value significant, at p<0.05; SOGIE: Sexual orientation and gender identity and expression.

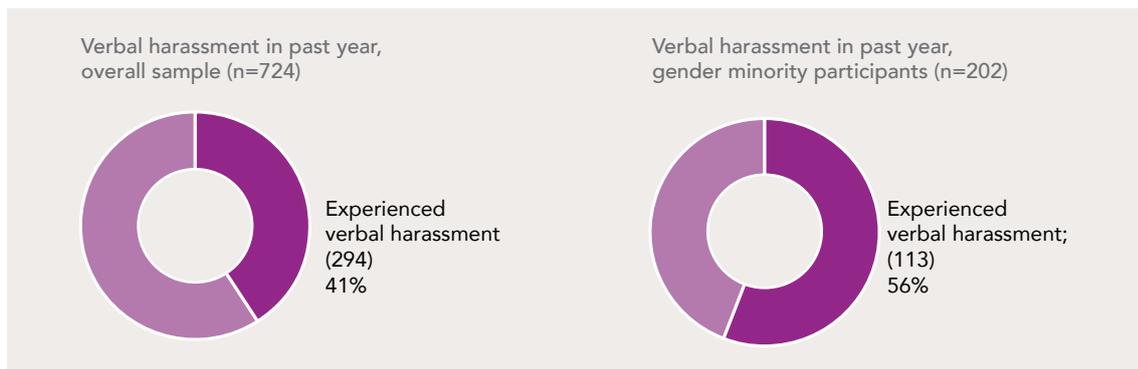
In our study, even more obvious than the different levels of violence according to race were the different levels of violence according to gender identity. Compared to cisgender participants, gender minority participants – and especially gender non-conforming participants – experienced much higher levels of violence (see Table 27) (p<0.05 in all categories). A Human Rights Watch Report (Nath, 2011) argues that it is visible gender non-conformity, and therefore *perceived* non-conforming *sexual orientation*, that places individuals at risk of violence. Our study further highlights how gender non-conformity can increase vulnerability to violence.

In the following subsections, we discuss the different forms of violence (verbal, sexual and physical) in detail.

Verbal harassment

Almost three quarters (73%) of participants had experienced verbal harassment due to their sexual orientation and/or gender identity or expression at some point in their life, and 41% in the previous year (Figure 6). This number was even higher for gender minority participants: almost four in five gender minority participants (79%) had experienced verbal harassment at some point in their life, and more than half (56%) in the previous year. This is notably higher than the findings of a recent South African study (OUT LGBT Well-being, 2016a), where 39% of all LGBTI participants, and 28% of transgender participants said that they had had verbal insults directed at them due to their SOGIE.

FIGURE 6: Verbal harassment, past year



Sexual violence

Forty-eight percent of participants were survivors of sexual violence (Figure 7). This number rose to 62% of participants when we looked at only gender minority participants ($p < 0.05$).

FIGURE 7: Sexual violence, lifetime



South African studies on the prevalence of sexual violence, conducted among women without specifying sexual orientation or gender identity, estimate the prevalence of sexual violence at 7% (Department of Health, 1999); and between 4.5% and 7.2%, depending on province (Jewkes et al., 1999). The findings from our sample suggest that the lifetime prevalence of sexual violence among LGBTI people is very much higher than among the general population.

Of the overall participant group, almost one in five participants (19%) had experienced sexual violence in the previous year (Figure 8). Of gender minority participants, it was almost three in ten participants (29%).

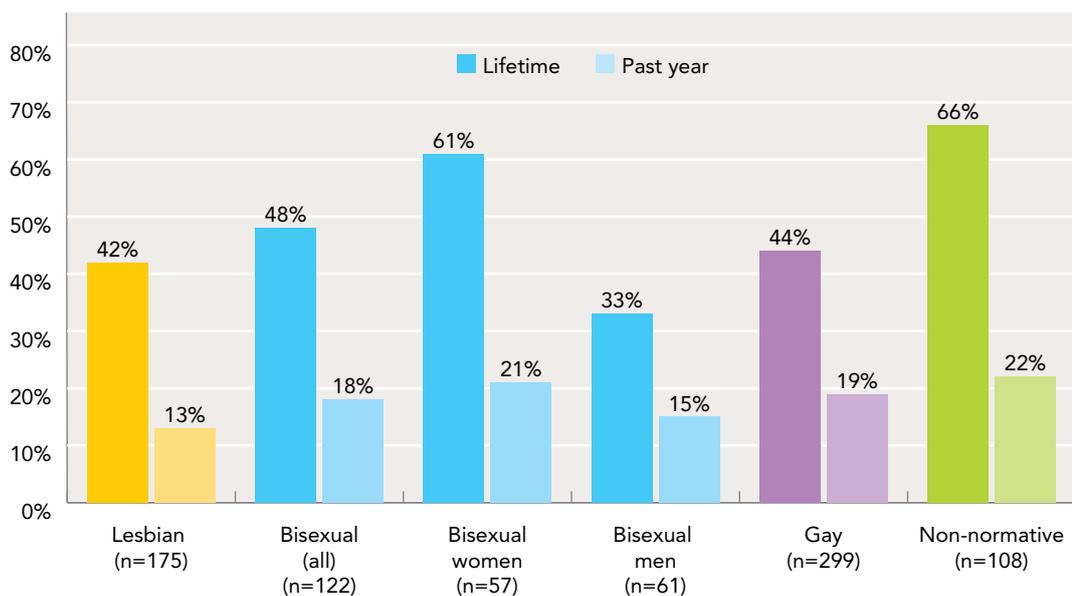
FIGURE 8: Sexual violence, past year



These numbers are higher than the findings of the recent Love Not Hate Campaign report (OUT LGBT Well-being, 2016a), which found that 6% of all LGBTI participants, and 11% of transgender participants, had been 'sexually abused or raped' in the past 2 years. It again is also significantly higher than the prevalence of sexual violence in general population surveys: the South African Victims of Crime Survey 2016/17, which was done among the general population in the same year as our study, found that 0.1% of men and 0.2% of women in the sample had experienced a sexual offence in the previous year (Statistics South Africa, 2017b).

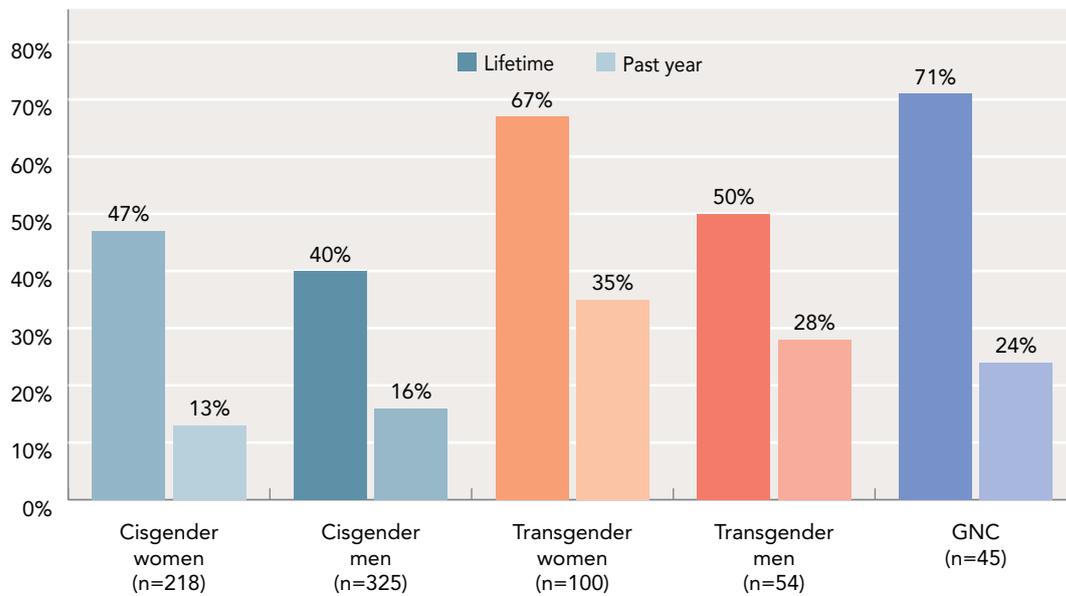
When disaggregated by sexual orientation and gender identity (see Figure 9 and Figure 10, and the tables on lesbian, bisexual and gay health in the Appendix), we found that lesbian women, gay men and bisexual people had experienced similar levels of lifetime and sexual violence. However, when we disaggregated bisexual people by gender, bisexual women had experienced much higher levels of sexual violence than bisexual men: in their lifetime, 61% of bisexual women had experienced sexual violence, compared to 33% of bisexual men; in the previous year, it was 21% of bisexual women compared to 15% of bisexual men.

FIGURE 9: Sexual violence, by sexual orientation



Among gender minority participants, the levels of sexual violence were higher for both lifetime sexual violence and sexual violence experienced in the past year, compared with the overall sample. The levels of sexual violence were also higher for specific gender minority groups when compared with their cisgender counterparts ($p < 0.05$, see Figure 10). For example, one in three transgender women had experienced sexual violence in the past year, compared to one in eight cisgender women.

FIGURE 10: Sexual violence, by gender identity



We now compare our findings to what we already know from other research. Sandfort and colleagues (2015) found that just under a third of South African sexual minority women in their sample had experienced sexual violence in their lifetime (Sandfort, Frazer, Matebeni, Reddy, Southey-Swartz, et al. 2015). Our findings confirm that sexual violence against South African lesbian people is very common, with findings even higher than Sandfort and colleagues' (46% lifetime prevalence of sexual assault among lesbian women in our sample) (see also: Mkhize et al. 2010; Nath 2011). It is possible that some lesbian identities are at higher risk for sexual violence in South Africa than others. Nath (2011) makes the important point that risk for sexual violence is strongly influenced by race and gender expression, with black butch lesbians being particularly at risk (Nath, 2011). Alternatively, other research suggests that sexual minority women with a more feminine gender expression have reported higher incidence of forced sex as compared to those with a less feminine gender expression (Sandfort, Frazer, Matebeni, Reddy, Southey-Swartz, et al., 2015). Our findings do suggest that black lesbians are at higher risk: although white and black women reported similar levels of *lifetime* sexual assault, the differences in recent experiences of sexual assault were starkly different: about one in fifty white women said they experienced sexual violence in the last year, whereas about one in five black lesbians said they had ($p < 0.05$).

Of equal concern are the high levels of lifetime sexual violence experienced by bisexual people and gay men in our sample – 48% and 41% respectively. In our sample, 17% of gay men, 21% of bisexual women and 15% of bisexual men had experienced sexual violence in the past year alone. A recent South African study, the Love Not Hate Campaign (OUT LGBT Well-being, 2016a) reports

that 6% of gay men, as well as 6% of bisexual people had been 'sexually abused or raped' in the past 2 years.⁸ Besides the findings from the Love Not Hate Campaign, sexual violence against gay and bisexual men has received little attention in South African advocacy and research. Our findings suggest that sexual violence against gay and bisexual men as well as bisexual women is very high and warrants inclusion in advocacy and research efforts. One reason our participants may have reported higher levels of sexual violence than in the Love Not Hate Campaign report is that we prompted participants to report sexual violence experiences by asking about specific perpetrators, such as intimate partners of the same and different sex, people they live with and strangers (see

Table 13 for more details). This may have prompted participants to identify instances of sexual assault they otherwise would not have.

The Love Not Hate Campaign also found that about one in ten (11%) of transgender participants had 'been sexually assaulted or raped' in the two previous years (OUT LGBT Well-being, 2016a). This number is not disaggregated further, for example into trans women and trans men. In the United States, the 2015 United States Transgender Survey showed that nearly half of transgender people (47%) have been sexually assaulted at some point in their lifetime, and one in ten (10%) have been sexually assaulted in the previous year (James *et al.*, 2016a). Our findings suggest that the levels of sexual violence experienced by transgender people in our study are higher than in the US, and also higher than in the other South Africa study, with one in three of our study's gender minority participants experiencing sexual violence in the previous year.

Our study did not collect data on the prevalence of sex work among participants. However, existing evidence shows that gender minority people are more likely to participate in sex work due to systemic, institutional and interpersonal discrimination that limits their access to education and work opportunities (Sausa, Keatley and Operario, 2007; Nadal, Davidoff and Fujii-Doe, 2014). For example, one in five participants (19%) in the 2015 United States Transgender Survey engaged in sex work for money, food, a place to sleep, or other goods or services (James *et al.*, 2016b). In a South African study, transgender participants also spoke about exchanging sex with money or gifts during key informant interviews about access to sexual health services (Stevens, 2012). The higher risk of experiencing violence among sex workers, and the fact that gender minorities may be more likely to do sex work, may account in some part for the extremely high prevalence of sexual violence, as well as other forms of violence in our study.

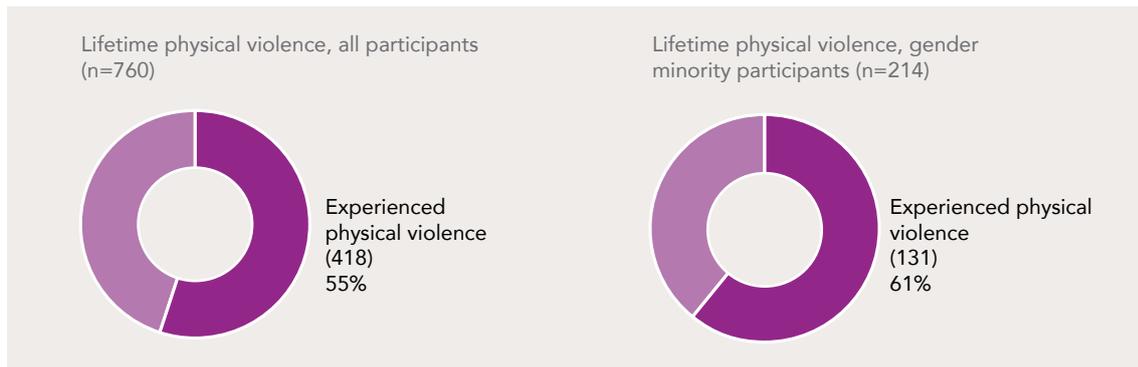
It is quite likely, however, that our findings are still under-estimated – as recent research suggests (Müller and Meer, 2018), SOGIE-motivated sexual violence against lesbian women can culminate in homicide. Because including data on deceased sexual and gender minority people was beyond the scope of this study, our findings might therefore underestimate the prevalence of bias-motivated sexual violence.

On the whole, our findings point out that a significant amount of LGBTI people are survivors of sexual violence. The World Health Organization has shown that the health consequences of sexual violence are significant and diverse: they include physical injuries, unwanted pregnancy, sexually transmitted infections, including HIV, higher rates of mental health concerns, including

8 The 'Love Not Hate Campaign' report did not disaggregate findings from bisexual people by gender.

depression and post-traumatic stress disorder, and higher likelihood of attempting suicide (Krug *et al.*, 2002). At the same time, our findings, as well as other research (Muller and Meer, no date; Meer and Müller, 2017a; Müller, 2017a) have shown that both the healthcare and the criminal justice system are currently not equipped to provide competent and affirming care to LGBTI survivors of sexual violence. Thus, there is a need for LGBTI affirming counselling and psychosocial support, as well as medico-legal and court preparation services, should survivors decide to report and cases be brought to trial.

FIGURE 11: Physical violence, lifetime

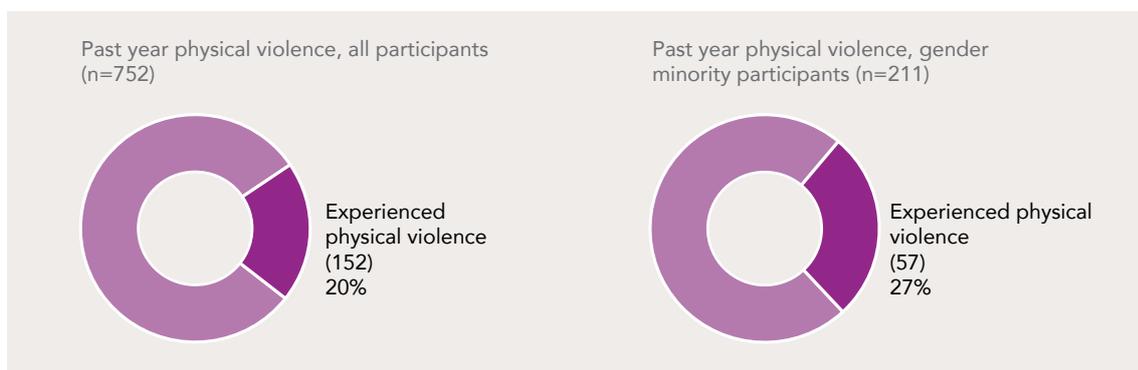


Physical violence

More than half of the participants in our study had experienced some form of physical violence at some point in their lives (Figure 11). Almost two thirds of gender minority participants had experienced physical violence (61%, $p < 0.05$).

In the year prior to answering the survey, one in five participants had experienced physical violence (Figure 12). This increased to one in four, when examining gender minority participants (27%, $p < 0.05$).

FIGURE 12: Physical violence, past year



Compared by sexual orientation, bisexual people had experienced the most physical violence, both in their lifetime and in the previous year (Figure 13). In their lifetime, bisexual women and men had experienced similar high levels of violence (58% and 57%, respectively). In the past year, bisexual men had experienced more physical violence (23%) than bisexual women (18%). The levels of physical violence among lesbian women and gay men were relatively similar, and again high.

FIGURE 13: Physical violence, by sexual orientation

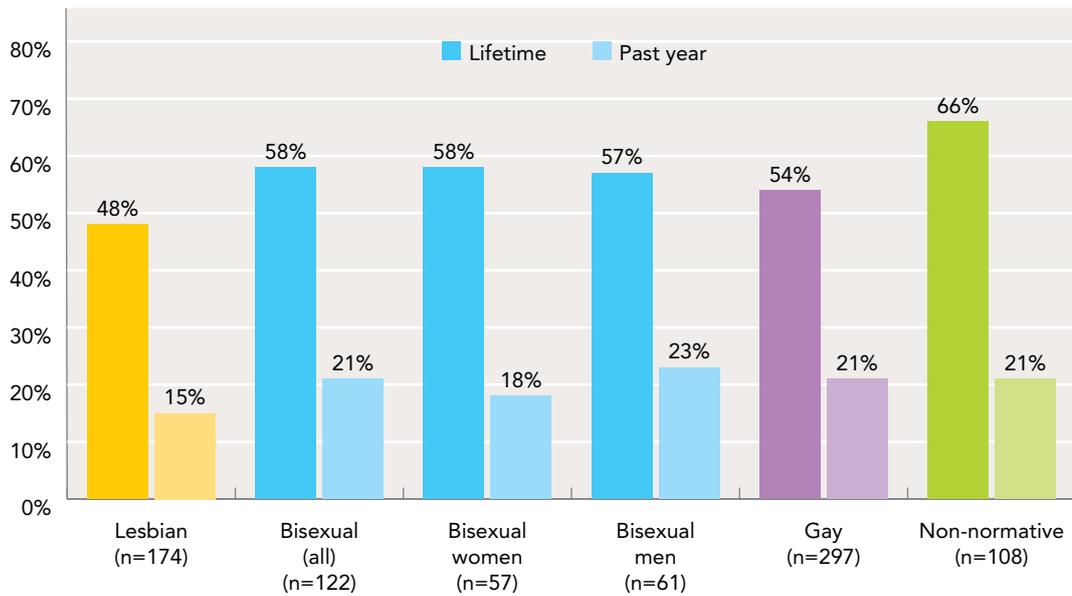


Figure 14 shows that gender minority participants experienced higher levels of violence than cisgender participants, regardless of sexual orientation. For example, almost two out of three (63%) transgender women had experienced physical violence in their lifetime – compared to half (50%) of the participants who identified as cisgender women. These violence levels are higher than what we know from existing studies, which mostly are from the US: in Virginia, US, 27% of transgender people participating in a community-based survey said they had experienced physical violence in their lifetime (Bradford *et al.*, 2013). In a study among transgender women who have a history of sex work, also done in the US, 51% of participants said they experienced physical violence in their lifetime (Nemoto, Bödeker and Iwamoto, 2011). Evidence suggests that transgender people are more vulnerable to violence if they experience more discrimination in their everyday lives (Bradford *et al.*, 2013). As our findings have shown, the gender minority participants in our study often live in financially precarious situations, and have very limited access to healthcare and socio-economic opportunities. While gender minority people worldwide may be more at risk for financial instability—for example, due to discrimination in employment—South Africans may be particularly at risk due to the particular socioeconomic context. This might be one explanation why the levels of physical violence among our study's transgender participants have are much higher than in the US.

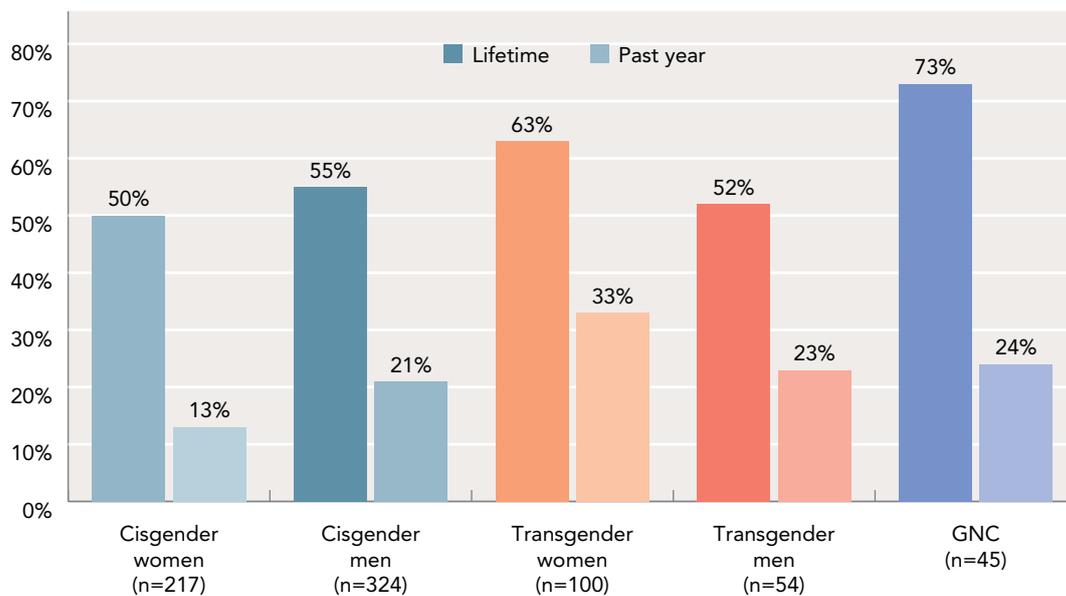
FIGURE 14: Physical violence, by gender identity

Figure 14 also shows that within the group of gender minority participants, gender non-conforming people and transgender women have experienced the highest levels of physical violence in our sample (73% among gender non-conforming people, 63% among transgender women, compared to 52% among transgender men). This suggests that perhaps more than gender minority status, non-conforming gender expression, and thus, being identifiable as a gender minority, places people at risk. Bockting and colleagues (Bockting *et al.*, 2013b), drawing on Kuiper & Cohen-Kettenis (Kuiper and Cohen-Kettenis, 1988), argue that passing as the opposite gender might be easier for transgender men than transgender women, and outlines that this might mean that transgender women more often experience the negative effects of being visible. Gender non-conforming people and transgender women might be less able to 'pass' than even transgender men (and transgender men might be somewhat shielded from transphobic violence through being more likely to 'pass'). This comports with Nath's argument (Nath, 2011) that homophobic sexual violence is motivated by non-conforming gender expression (which then *assumes* a non-conforming sexual orientation). While our findings clearly show that the levels of violence experienced by both gender minority and cisgender South Africans are very high, we caution against using sexual minority or gender minority categories to determine who is at risk for violence. These categories alone do not adequately demonstrate the shades of non-conforming gender expression that puts people at risk for violence by 'revealing' one's (assumed) sexual orientation or gender identity.

Perpetrators of sexual and physical violence

We also asked participants who the perpetrators of sexual and physical violence were (Table 13).

Intimate partner violence

First, we found high levels of intimate partner violence across all sexual orientations and gender identities. More than one in four participants (28%) said that they had been sexually assaulted by an intimate partner of any gender. This number was significantly higher among Black participants

(30%) compared to White participants (23%). Among lesbian women, one in four (25%) had been sexually assaulted by an intimate partner; among gay men, it was more than one in five (22%; see also Table 21, Table 22 and Table 23). Among gender minority participants, 41% (more than one in three) had been sexually assaulted by an intimate partner. This was significantly more than among cisgender participants (24%, $p < 0.05$). Among transgender women, 44% had experienced sexual violence by an intimate partner; among transgender men it was 37%; and among gender non-conforming people 38% (see also Table 27).

Almost one in three participants had been physically assaulted by an intimate partner (32%). Again, this number was significantly higher among black participants (36%) compared to white participants (23%).

These findings of high levels of intimate partner violence quantify recent findings by South African researchers (Sanger and Lynch, 2017), who described how patriarchal norms contribute to intimate partner violence in women's same-sex relationships. In our sample, one in three participants (32%) had experienced physical violence by an intimate partner. In a recent study among women in the general population, one in five (21%) had experienced violence by an intimate partner. Importantly, thus, our study shows that levels of intimate partner violence among same-sex relationships might be even higher than among heterosexual people in the general population, a finding also suggested by a study from the United States (Walters, Chen and Breiding, 2013).

TABLE 13: Perpetrators of violence

	Overall sample (n=832)		Black [†] participants (n=608)			Gender minority [^] participants (n=232)		
	n	%	n	%	p	n	%	p
Lifetime sexual violence								
Intimate partner								
	(n=758)		(n=563)				(n=214)	
	215	28.36	171	30.37	0.037**	87	40.65	<0.001*
Someone known (not intimate partner)								
	(n=752)		(n=557)				(n=211)	
	221	29.39	159	28.55	0.326	80	37.91	0.001*
Stranger								
	(n=743)		(n=547)				(n=208)	
	191	25.71	151	27.61	0.047**	72	34.62	0.001*
Someone lived with (intimate partner or other)								
	(n=731)		(n=537)				(n=206)	
	91	12.45	73	13.59	0.095	35	16.99	0.022*

	Overall sample (n=832)		Black [†] participants (n=608)			Gender minority [^] participants (n=232)		
	n	%	n	%	p	n	%	p
Lifetime physical violence								
Intimate partner								
	(n=752)		(n=556)			(n=214)		
	244	32.45	199	35.79	0.001**	78	36.45	0.162
Someone known (not intimate partner)								
	(n=745)		(n=549)			(n=210)		
	224	30.07	179	32.60	0.012**	74	35.24	0.064
Stranger								
	(n=750)		(n=554)			(n=213)		
	284	37.87	223	40.25	0.027**	95	44.60	0.021*
Someone lived with (intimate partner or other)								
	(n=748)		(n=552)			(n=213)		
	142	18.98	107	19.38	0.610	59	27.70	<0.001*

Participant felt any lifetime sexual or physical violence was linked to being LGBTI								
	(n=475)		(n=354)			(n=149)		
Yes	291	61.26	238	67.23	<0.001**	104	69.80	0.011*

[†] Black refers to all participants who identified as 'Black', 'Coloured', 'Indian' and 'other'; [^] Gender minority participants are participants who identify as transgender, gender non-conforming or 'other' gender identities; *Chi square/Fisher's exact test p-value significant, at p<0.05

Stranger violence

Second, we found that participants were more a little more likely to report having experienced physical violence by strangers than by other perpetrators: 38% of all participants had been physically assaulted by a stranger in their lifetime. Gender minority and black participants were significantly more likely to experience physical assault by a stranger than their cisgender (45% compared to 36%, p<0.05) and white counterparts (40% compared to 31%, p<0.05).

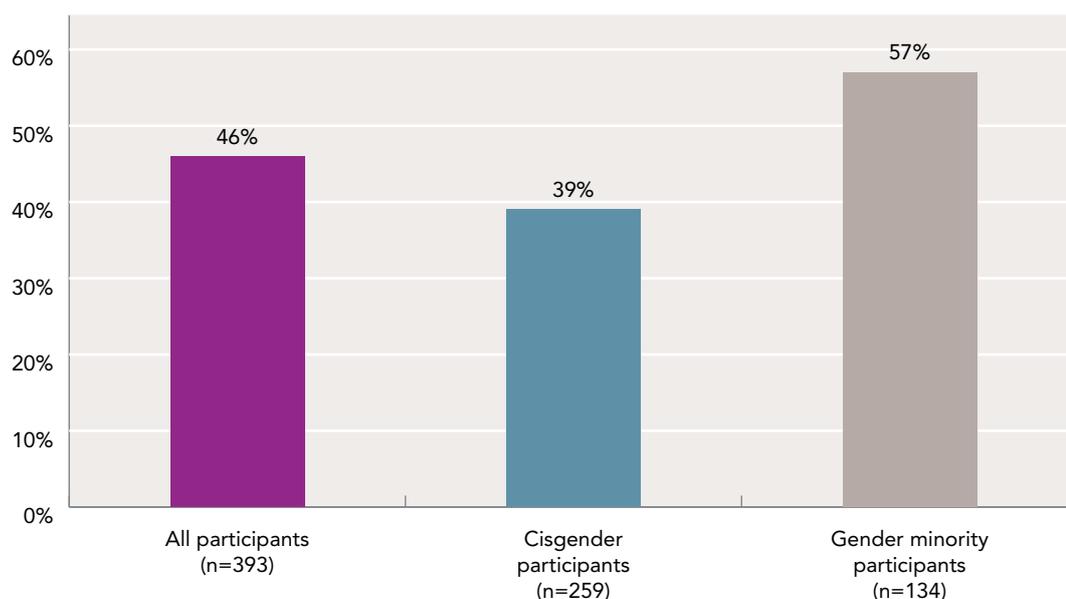
SOGIE-motivated violence

Third, more than half of all participants (61%), and two out of three Black participants (67%) felt that the violence they experienced was linked to their sexual orientation and gender identity. Among gender minority participants, this was even higher, at 70% of participants. While we cannot verify the motivation of the perpetrator(s), these findings contribute to the social context of violence motivated by sexual orientation or gender identity. Violence that is motivated by someone's sexual orientation or gender identity sends a message to all LGBTI people (Breen and Nel, 2011). This is detrimental to LGBTI people's mental health and well-being, as we will show in the coming sections of this report.

Impact of violence

We asked participants who had experienced sexual or physical violence in their lifetimes about three signs of post-traumatic stress. We classified participants who experienced all three symptoms as showing signs of post-traumatic stress. Forty-six per cent of all participants who had experienced violence showed signs of post-traumatic stress (Figure 15). The percentage among gender minority people was higher: more than half of all gender minority participants (57%) showed signs of post-traumatic stress.

FIGURE 15: Signs of post-traumatic stress



Participants who experienced any sexual or physical violence in the last year were asked about whether they reported it to the police, and if they had sought medical care (Table 14). Only one in four participants (25%) had reported to the police. More participants had gone to a healthcare provider for care, though about half had not.

TABLE 14: Reporting violence

	Overall sample (n=182)		Black † participants (n=153)			Gender minority ^ participants (n=70)		
	n	%	n	%	p	n	%	p
Experienced violence in previous year								
Sought medical care	(n=166)		(n=138)			(n=66)		
	76	45.78	66	47.83	0.241	33	50.00	0.376
Reported to police	(n=168)		(n=140)			(n=66)		
	42	25.00	36	25.71	0.633	22	33.33	0.045*

	Overall sample (n=182)		Black † participants (n=153)			Gender minority ^ participants (n=70)		
	n	%	n	%	p	n	%	p
Felt treated with less courtesy for being LGBTI	(n=69)		(n=59)				(n=29)	
Categorical					0.555			0.002*
Never	17	24.64	13	22.03		1	3.45	
Rarely	9	13.04	8	13.56		3	10.34	
Sometimes	16	23.19	15	25.42		8	27.59	
Often	27	39.13	23	38.98		17	58.62	
Binary					0.223			<0.001*
No (Never)	17	24.64	13	22.03		1	3.45	
Yes (Rarely/ Sometimes/Often)	52	75.36	46	77.97		28	96.55	

† Black refers to all participants who identified as 'Black', 'Coloured', 'Indian' and 'other'; ^ Gender minority participants are participants who identify as transgender, gender non-conforming or 'other' gender identities; *Chi square/Fisher's exact test p-value significant, at $p < 0.05$

In South Africa generally, the number of survivors of sexual or physical violence who report to police are low. For example, Machisa et al. (Machisa et al., 2011) in a study in Gauteng, estimate that only one in 25 rapes had been reported to the police. In the Love Not Hate Campaign study (OUT LGBT Well-being, 2016a), only 12% of LGBTI participants said that they had reported violence to the police. Compared to these studies, the levels of reporting in our findings are relatively high. It is possible that because our participants were mostly approached through LGBTI organisations, they were more aware of their rights, had better access to organisational support, and thus also more support to report to police.

Mental health outcomes

Mental health outcomes in the overall sample

Table 15 provides an overview of the mental health outcomes in the overall sample of participants. Additionally, the table also shows these mental health outcomes among all Black participants and all gender minority participants. The levels of depression, anxiety, suicidality and substance use were high in our sample as compared to those reported for the general South African population (Herman, D. Stein, et al., 2009; Tomlinson et al., 2009; Peltzer, Davids and Njuho, 2011; Reddy et al., 2015; National Department of Health et al., 2017).

TABLE 15: Overall mental health outcomes

	Overall sample (n=832)		Black † participants (n=608)			Gender minority^ participants (n=232)		
	n	%	n	%	p	n	%	p
Depression (CES-D-10)	(n=770)		(n=571)				(n=220)	
Classified as not depressed	330	42.86	263	46.06	0.001*	82	37.27	0.046*
Classified as depressed	440	57.14	308	53.94		138	62.73	

Anxiety (GAD-7)	(n=750)		(n=549)			(n=208)		
Categorical					<0.001*			0.006*
No signs of anxiety	254	33.87	196	35.70		67	32.21	
Signs of mild anxiety	241	32.13	190	34.61		60	28.85	
Signs of moderate anxiety	150	20.00	99	18.03		37	17.79	
Signs of severe anxiety	105	14.00	64	11.66		44	21.15	
Binary					<0.001*			0.077
No/mild anxiety	495	66.00	386	70.31		127	61.06	
Moderate/severe anxiety	255	34.00	163	29.69		81	38.94	

Suicidality								
Suicidal ideation, lifetime	(n=731)		(n=533)			(n=213)		
	451	61.70	301	56.47	<0.001*	142	66.67	0.088
Suicidal attempts, lifetime	(n=721)		(n=524)			(n=208)		
	275	38.14	219	41.79	0.001*	95	45.67	0.010*
Suicidal ideation, past year	(n=680)		(n=482)			(n=202)		
	182	26.76	109	22.61	<0.001*	73	36.14	<0.001*
Suicidal attempts, past year	(n=613)		(n=488)			(n=201)		
	71	10.38	62	12.70	0.001*	33	16.42	0.001*

	Overall sample (n=832)		Black † participants (n=608)			Gender minority^ participants (n=232)			
	n	%	n	%	p	n	%	p	
Alcohol use	(n=753)		(n=543)				(n=210)		
Categorical						<0.001*			0.130
No alcohol use	127	16.87	97	17.86		40	19.05		
Some alcohol use	276	36.65	162	29.83		74	35.24		
Hazardous use	205	27.22	155	28.55		53	25.24		
Harmful use	57	7.57	46	8.47		11	5.24		
Alcohol dependence	88	11.69	83	15.29		32	15.24		
Binary						<0.001*			0.779
No/some alcohol use	403	53.52	259	47.70		114	54.29		
Hazard/Harm/dependence	350	46.48	284	52.30		96	45.71		

Drug use	(n=738)		(n=535)				(n=201)		
Categorical						<0.001*			0.248
No drug use	489	66.26	367	68.60		126	62.69		
Some drug use	101	13.69	59	11.03		25	12.44		
Harmful drug use	110	14.91	75	14.02		38	18.91		
Drug dependence	38	5.15	34	6.36		12	5.97		
Binary						0.778			0.047*
No/some drug use	591	79.97	427	79.66		151	75.12		
Harmful use/dependence	148	20.03	109	20.34		50	24.88		

Tobacco use	(n=733)		(n=520)				(n=218)	
Doesn't smoke at all	379	51.71	256	49.23	0.065	106	48.62	0.273
Smoke some days	151	20.60	118	22.69		43	19.72	
Smoke everyday	203	27.69	146	28.08		69	31.65	

† Black refers to all participants who identified as 'Black', 'Coloured', 'Indian' and 'other'; ^ Gender minority participants are participants who identify as transgender, gender non-conforming or 'other' gender identities; *Chi square/Fisher's exact test p-value significant, at p<0.05

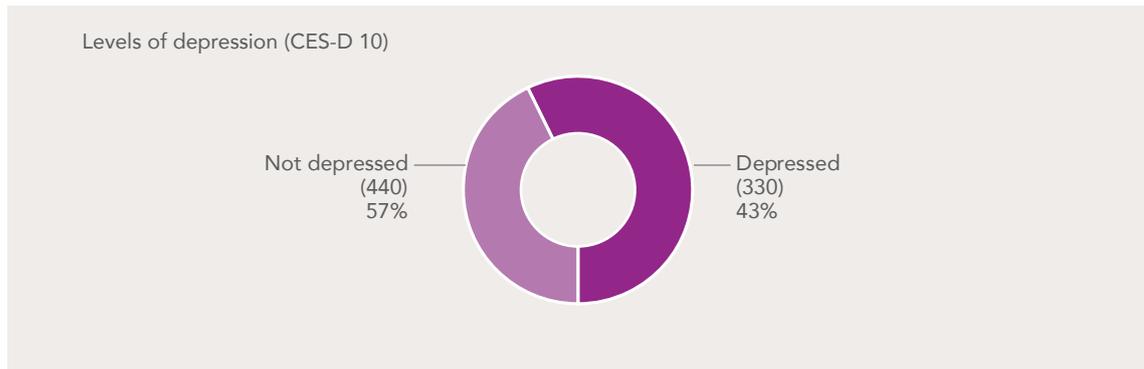
Depression

Based on the CES-D 10, a screening tool for depression, more than half of our participants (440 of 770, 57%) were classified as currently depressed (Figure 16).

By comparison, general population studies using different depression measurements in South Africa have estimated a one year prevalence of major depression to be about 5%, with 'females' having higher rates than 'males' (Herman, D. Stein, *et al.*, 2009; Tomlinson *et al.*, 2009).

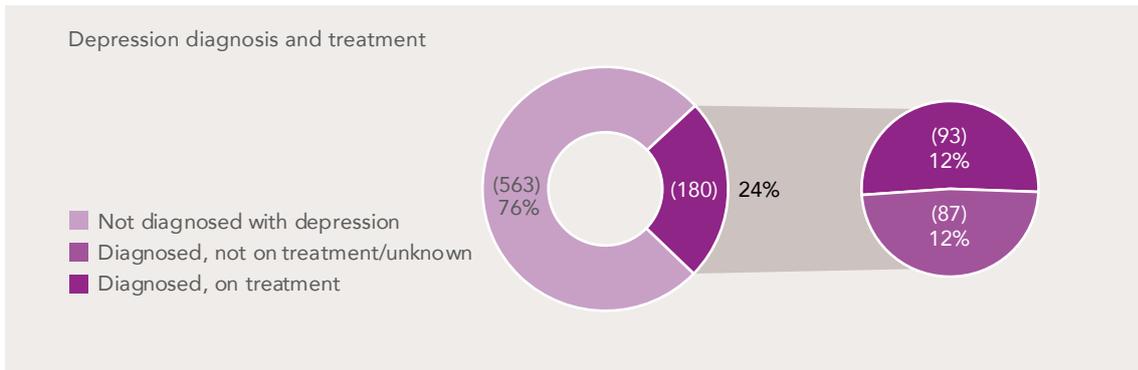
Even with the possible poor specificity of the CES-D 10, there is a large difference between 5% and 57%, suggesting that sexual and gender minority South Africans may be at particular risk for depression and be considered as a vulnerable population needing access to mental healthcare. Compared to women who recently gave birth, who are considered to be particularly vulnerable to post-partum depression, the levels of depression in our sample were also much higher: a South African study found that 35% of women had post-partum depression (Tomlinson *et al.*, 2006). This is much less than the 57% of participants in our sample.

FIGURE 16: Depression, overall sample



Despite the high CES-D 10 scores, only one in four participants said that they had previously been diagnosed with depression (Figure 17). Of those, about half were receiving treatment at the time of filling out the survey. When we looked at this in comparison to the participants' CES-D 10 scores, 66% of those showing signs of depression had never been told by a healthcare provider that they have clinical depression. This suggests that there may be a large percentage of sexual and gender minority people who have not received diagnoses and treatment that could help them manage their symptoms of depression.

FIGURE 17: Depression diagnosis and treatment



When comparing Black and White participants, gender minority and cisgender people, and by sexual orientation (lesbian, bisexual, gay (men), and 'non-normative'), we observed differences in depression among these groups. Among Black participants, the level of depression signs (54%) was lower than the number of White participants (67%; $p < 0.05$). We did not expect Black participants to have a significantly lower level of depression signs than White participants. It is possible that the questions of the CES-D 10 were interpreted or experienced differently by participants of different cultural or social backgrounds; to determine this is beyond the scope of this study (Westermeyer, 1985; Flaherty *et al.*, 1988).

Gender minority participants had higher levels of depression (63%) than cisgender participants (55%; $p < 0.05$). Participants with 'non-normative' sexual orientation and bisexual participants had the highest levels of depression signs (75% and 65%). Bisexual women in particular had high levels of depression signs (81%). This is aligned to findings from a recent systematic review, which also found that bisexual people seemed to have the highest rates to depression among sexual minority people (Plöderl and Tremblay, 2015).

FIGURE 18: Depression, by sexual orientation

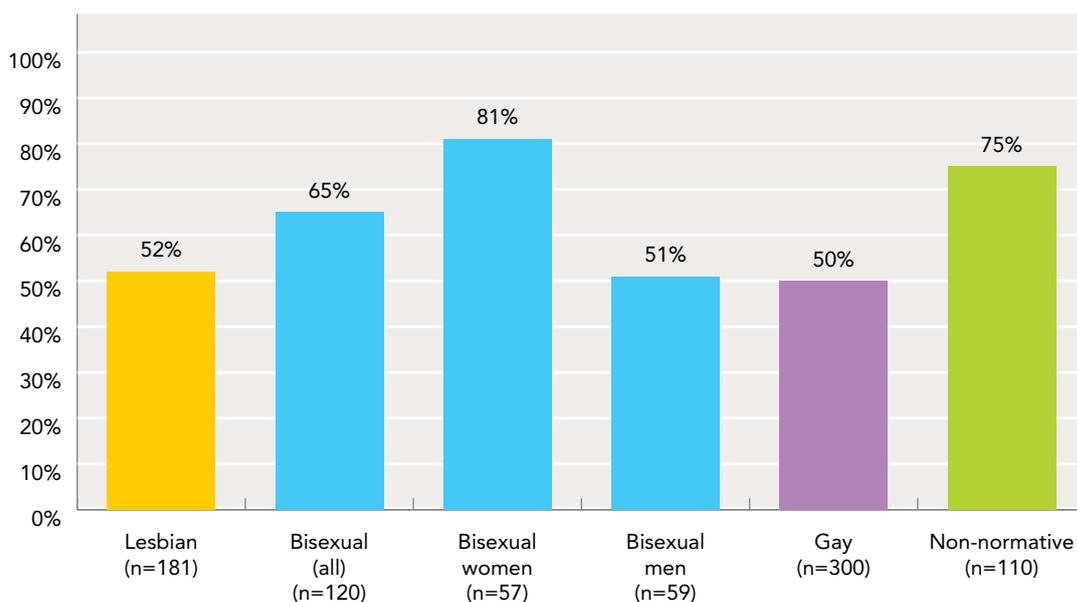
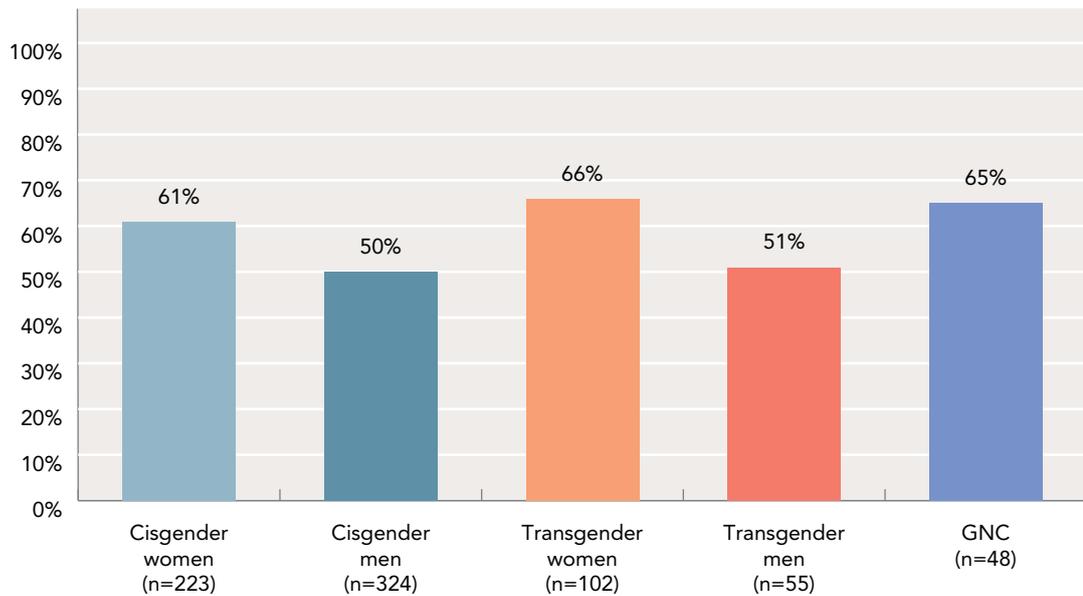


FIGURE 19: Depression, by gender identity



We used logistic regression⁹ to examine how other factors impact the relationships between sexual orientation, gender identity and depression. Once we removed the possible effects of these factors, we did not find any statistically significant differences in levels of depression across sexual orientation and gender identity. However, we noted that anxiety and thinking about suicide were significantly associated with depression following adjustment (Table 16).

TABLE 16: Logistic regression model of adjusted odds ratios for depression (CES-D 10 cut-off of 10): significant p-values only

Depression	AOR	95% CI	p
Anxiety (GAD-7 score)	1.47	1.38 – 1.56	<0.001
No suicidal ideation in last year		Reference category	
Suicidal ideation in last year	2.23	1.18 – 4.20	0.013

AOR: adjusted odds ratio; CI: confidence intervals;

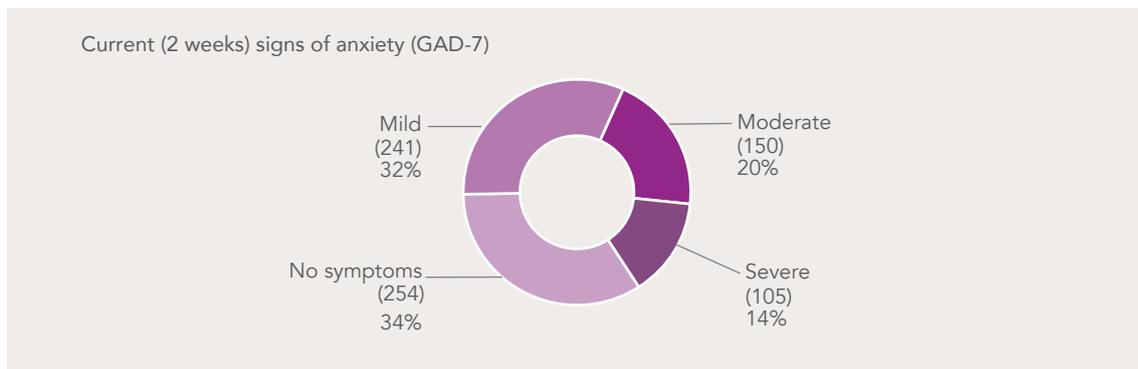
Although our findings do not suggest differences in depression between different sexual orientations and gender identities within our sample, we found that levels of depression among sexual and gender minority South Africans are high. Our findings suggest sexual and gender minority people are at much higher risk for depression than what we know about the general South African population. Further investigation into depression and access to mental healthcare among sexual and gender minority people is needed.

⁹ In this model where the binary CES-D 10 score was the outcome, we adjusted for the following: anxiety (the Generalized Anxiety Disorder 7-item scale (GAD-7) score), alcohol and drug use (the Alcohol Use Disorders Identification Test (AUDIT) and Drug Use Disorders Identification Test (DUDIT) scores), smoking, socioeconomic status (employment, financial security, and housing), thinking about suicide in the last year, suicide attempt in the last year, lifetime experiences of sexual violence, lifetime experiences of physical violence, signs of post-traumatic stress, whether the survey was administered by the participant or a fieldworker, race and age.

Anxiety

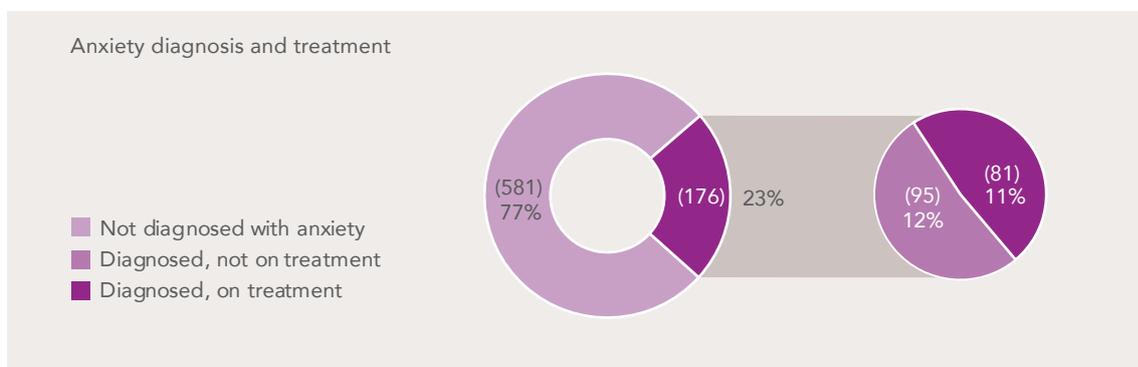
The instrument GAD-7 was used to assess signs of anxiety in participants in the last two weeks. Based on the anxiety score (GAD-7), we classified participants into four categories: participants with no signs of anxiety, with signs of mild anxiety, with signs of moderate anxiety, and with signs of severe anxiety. The GAD-7 score should not be taken as a definitive diagnosis of anxiety in participants, but an assessment of current symptoms. According to the anxiety scores, almost two-thirds of participants (66%) had experienced anxiety in the last two weeks (see Figure 20). More than one in ten participants (14%) reported signs of severe anxiety.

FIGURE 20: Signs of anxiety, overall sample



We also asked participants if they had ever been diagnosed with anxiety. Overall, one in four participants said that they had previously been diagnosed by a healthcare worker with clinical anxiety. Half of participants who said they had been diagnosed were receiving treatment at the time of filling out the survey (Figure 21). Just over half of participants with symptoms of severe anxiety had never been told by a doctor that they have clinical anxiety (54 participants of the 105 classified with severe anxiety symptoms). This suggests that sexual and gender minorities with severe anxiety symptoms (and possibly anxiety disorders) are not accessing the healthcare that they need.

FIGURE 21: Anxiety diagnosis and treatment

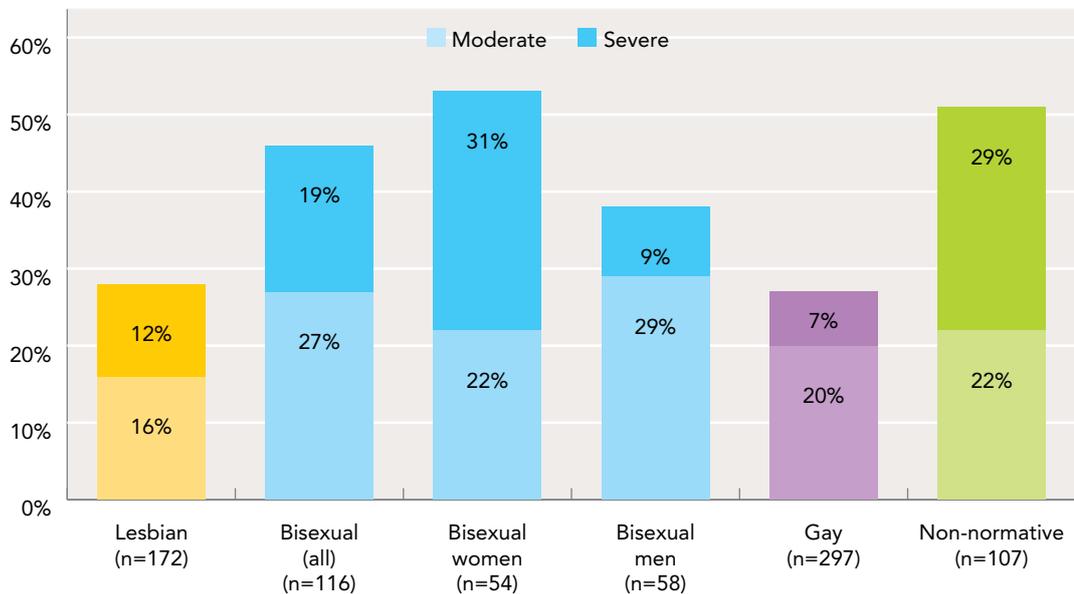


In South Africa, anxiety disorders are among the most prevalent mental health disorders (Herman, D. Stein, *et al.*, 2009). One year prevalence of any anxiety disorder has been estimated to be about 8% in the general population (Herman, D. Stein, *et al.*, 2009). The GAD-7 measures symptoms of

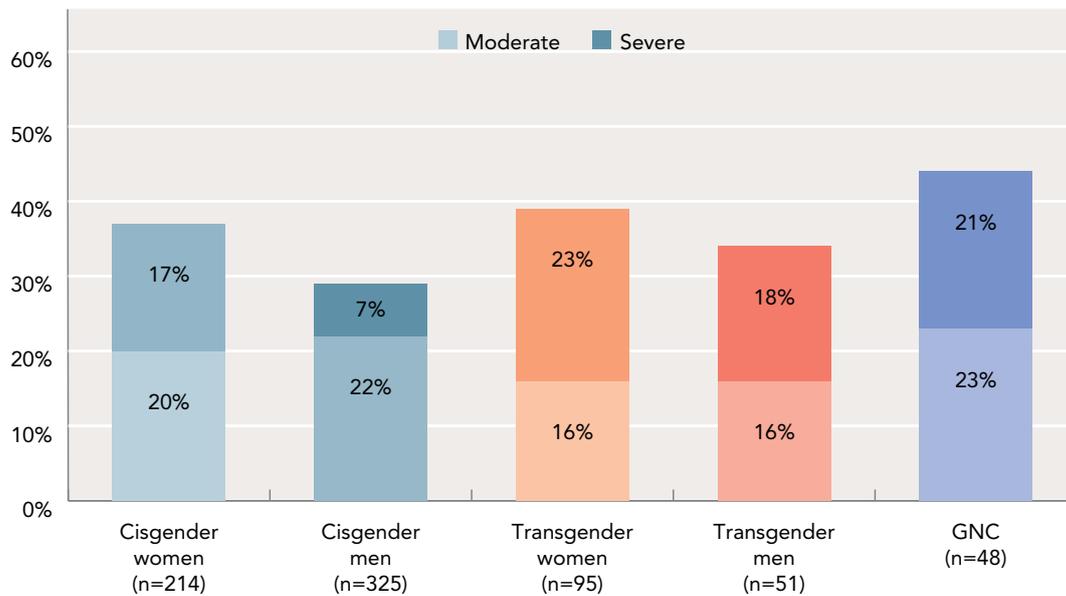
anxiety over the past two weeks. Although we did not record one year prevalence specifically, our findings suggest higher levels of anxiety among sexual and gender minority people than in the general population.

We observed differences in anxiety levels by race, gender identity, and sexual orientation. Anxiety levels were slightly lower among Black participants (see Table 15). When we examined anxiety levels by sexual orientation (Figure 22, Table 21, Table 22 and Table 23), we saw that people with 'non-normative' sexual orientations and bisexual people were the group with the largest proportion of anxiety signs, and had the highest proportions of severe anxiety at 29% and 19%, respectively. Within the group of bisexual participants, bisexual women had higher levels of anxiety that would require assessment than bisexual men: 53% of bisexual women showed signs of anxiety that would require assessment than bisexual men: 53% of bisexual women showed signs of moderate or severe anxiety, versus 38% of bisexual men (Table 23, Figure 22).

FIGURE 22: Anxiety, by sexual orientation



Gender minority participants had higher levels of severe anxiety than cisgender participants (Figure 23, Table 15). For example, twenty-three percent of transgender women and 21% of gender non-conforming participants had severe levels of anxiety, compared to 7% of cisgender men participants (Table 27).

FIGURE 23: Anxiety, by gender identity

Differences by gender identity and sexual orientation disappeared when we adjusted using logistic regression.¹⁰ Black participants remained less likely to have signs of anxiety. Additionally, we noted that depression (CES-D 10 score) was positively associated with having signs of anxiety, and that age (slightly), race and experiencing sexual violence in their lifetime were negatively associated with anxiety (Table 17). This means older participants, black participants and participants who had experienced sexual violence were less likely to have anxiety.

TABLE 17: Logistic regression model of adjusted odds ratios for anxiety (GAD-7 cut-off of 10): significant p-values only

Anxiety	AOR	95% CI	p
Age (years)	0.96	0.93 – 0.99	0.023
Depression (CES-D 10 score)	1.40	1.33 – 1.48	<0.001
White	-	Reference category	
Black	0.47	0.27 – 0.82	0.008
No experience of sexual violence	-	Reference category	
Experienced sexual violence (lifetime)	0.49	0.29 – 0.84	0.009

AOR: adjusted odds ratio; CI: confidence intervals;

It is unsurprising that anxiety and depression were found to be positively associated, as current literature suggests these disorders commonly co-occur (Clinic, 2017). However, we did not expect lifetime sexual violence to be statistically protective to anxiety. Age did not have a very notable impact upon anxiety in our sample—although age was significantly different between those with and without anxiety, the size of the difference is very small (AOR 0.96 (0.93 – 0.99), $p < 0.05$).

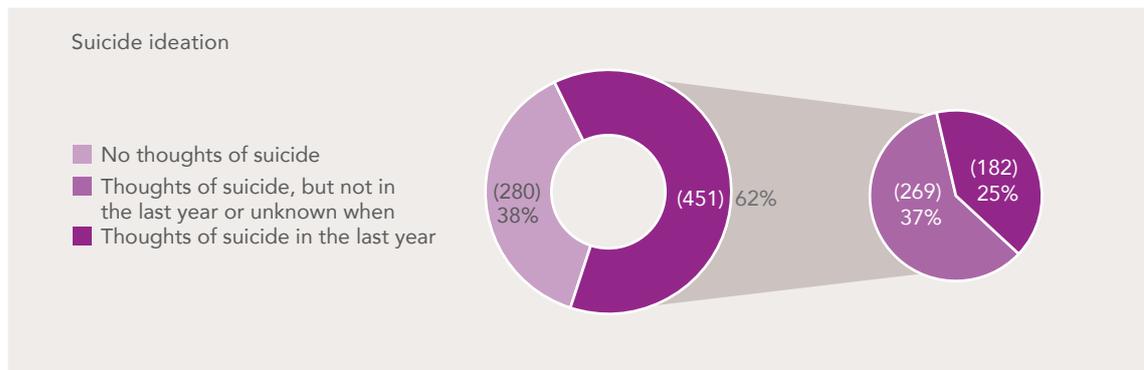
10 In this model where the binary variable for GAD-7 was the outcome, we adjusted for: depression (CES-D 10 score), alcohol and drug use (AUDIT and DUDIT scores), socioeconomic status (employment, financial security, and housing), thinking about suicide in the last year, suicide attempt in the last year, lifetime experiences of sexual violence, lifetime experiences of physical violence, whether the survey was administered by the participant or a fieldworker, race and age.

Suicidality

We asked four questions about suicide: whether participants had thought about ending their life (suicidal ideation) at some point in their lives, and in the past year; and whether participants had tried to end their own life (suicide attempt) at some point in their lives, and in the past year (Table 15).

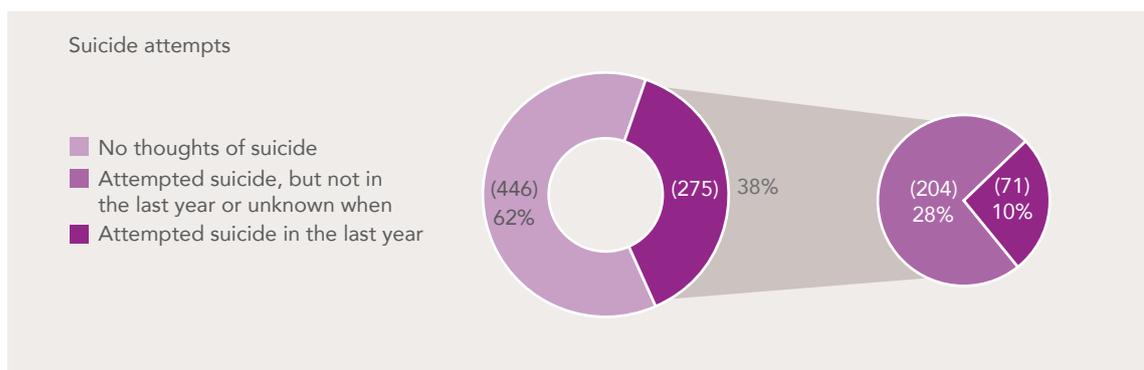
Figure 24 shows how many participants had ever thought about ending their life. Almost two thirds of participants (62%) had thought about ending their life at least once at some point in their life. Of those who had thought about it, almost half (46%) had thought about ending their life in the previous year.

FIGURE 24: Suicidal ideation



Two in five participants (38%) had tried to end their life at some point in their lives. One in six participants (17%) had tried to end their life in the past year (Figure 25). For comparison, the level of suicide attempts in South African adolescents of the general population, based on previous studies, is estimated around 8% (Herman, D. J. Stein, et al., 2009).

FIGURE 25: Suicide attempts, lifetime and past year



Generally, suicidality, and attempts and ideation in particular, is difficult to measure in population-based ways. In South Africa, accurate statistics on suicide attempts and ideation are scarce, though ideation is recognised as a clear warning sign for risk of death by suicide (Schlebusch, 2012). Statistics South Africa acknowledges in their most recent mortality report (2017, based on numbers from 2015), that misclassification is a problem in recording unnatural deaths. The report estimates that about 1% of unnatural deaths are attributed to suicide, however, the report acknowledges this is likely an underestimate. Recorded deaths from suicide are highest among

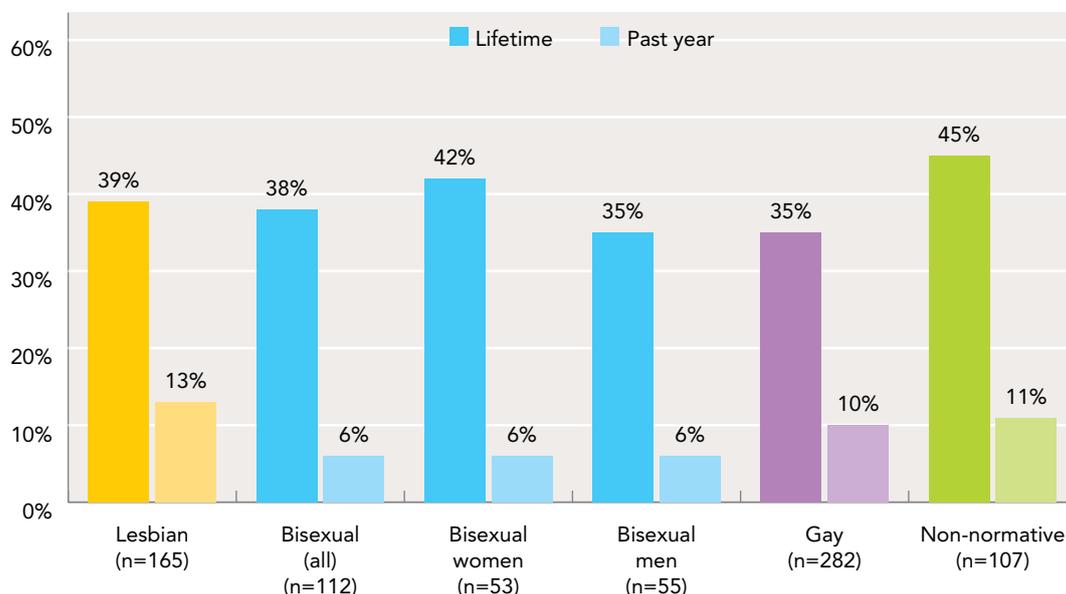
young 'males' (151 deaths in 2015) and 'females' (48 deaths in 2015) ages 15 to 29. The report does not disaggregate data by sexual orientation or gender identity, and does not explain how transgender and gender non-conforming people were classified in reporting ((Stats SA) Statistics South Africa, 2017). Slightly older data analysed by the Medical Research Council (MRC) of South Africa (2016, based on numbers from 2012), estimates higher numbers of deaths due to suicide—the MRC reported a total of 4629 deaths from suicide in 2012, while Statistics South Africa reported only 484 deaths from suicide in 2015 (Pillay-van Wyk *et al.*, 2016; (Stats SA) Statistics South Africa, 2017).

A systematic review conducted by King and colleagues (2008) highlights the higher risk of suicidality that sexual minority people experience, though only studies from North America, Europe and Australasia were eligible to be included (further highlighting the need for research on the African continent). Their meta-analysis suggests that sexual minority people have about twice the risk of attempting suicide compared to non-sexual minorities (King *et al.*, 2008).

In our sample, black participants were less likely report thinking about suicide than white participants, yet black participants were more likely to attempt suicide. This was true for both lifetime and past year reporting (Table 15).

When looking at suicide attempts, participants of all sexual orientations showed similar numbers (Figure 26, Table 21, Table 22 and Table 23), . Lesbian participants had the highest level of attempted suicide in the past year, with more than one in ten attempting suicide in the past year.

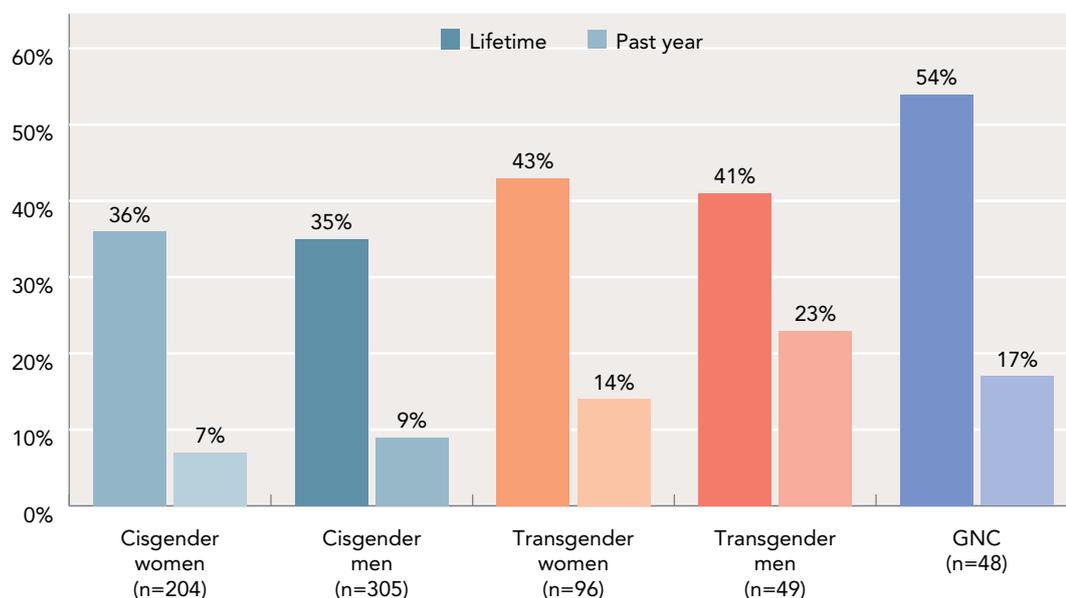
FIGURE 26: Suicide attempts, by sexual orientation



When comparing cisgender and gender minority participants (Table 15), we found that gender minority participants were a little more likely than cisgender participants to have thought about suicide in their lifetime, though this was not statistically significant (67% of gender minority participants as compared to 60% of cisgender participants). When looking at lifetime suicide attempts, the difference increased and is significant: 46% of gender minority participants had tried to end their life, compared to 35% of cisgender participants ($p < 0.05$). In the past year, gender minority participants were also more likely to have attempted suicide than their cisgender counterparts.

Nearly a quarter of transgender men in our study had attempted suicide in the past year. The level of suicide attempts among transgender women in our sample was higher than findings from an international systematic review (43% in our sample, compared to 31% in the systematic review (Herbst *et al.*, 2008)).

FIGURE 27: Suicide attempts, by gender identity



While ideation is a risk factor for suicide attempts, our findings suggest that there may be differences between ideation and attempt by sub-group. Significant associations between sexual orientation or gender identity and past-year suicidality disappeared following adjustment.¹¹ However, a difference by race persisted in suicide ideation and attempts. White participants were significantly more likely to think about suicide in the last year than Black participants (Table 18). We found this surprising, though it is important to note that Black participants had significantly higher suicide attempts than White participants in our sample. Research with sexual and gender minority people from Western settings has suggested that Black and Latino people may be more likely to consider suicide (Haas *et al.*, 2010). However suicidality research from South Africa has reported mixed associations with race, with some research reporting Black and Indian people to be at higher risk (Naidoo and Schlebusch, 2014) and some research reporting White people to be at higher risk (van Pletzen *et al.*, 2012). Other research suggests that examining identities intersectionally by race, age, and location may be necessary to better understand suicide risks (Burrows, Vaez and Laflamme, 2007). These research studies from South Africa did not report on sexual and gender minority status, despite this being a known risk factor for suicidality (King *et al.*, 2008; Haas *et al.*, 2010).

Participants with a higher CES-D 10 (depression) score were significantly more likely to report thinking about and attempting suicide in the last year and those who self-administered the survey

¹¹ We ran two logistic regression models, one with past-year suicidal ideation as the outcome and one with past-year suicidal attempts as the outcome. In both models, we adjusted for: gender identity, sexual orientation, depression (CES-D 10 score), anxiety (GAD-7 score), alcohol and drug use (AUDIT and DUDIT scores), traumatic experiences (lifetime sexual and physical violence, signs of post-traumatic stress) socioeconomic status (employment, financial, security, and housing), whether the survey was administered by the participant or a fieldworker, race and age.

were significantly more likely to report thinking about suicide. Participants may have felt more comfortable disclosing suicidal ideation on their own, rather than telling a fieldworker.

When it came to suicide attempts in the last year, financial security became a significantly protective factor. Other research, including research specifically among gender minority people have reported similar associations between homelessness or formality of housing and suicidality among gender minorities (Marshall *et al.*, 2016).

An alarming finding was the high association of lifetime sexual violence and past-year suicidality, with those who experienced sexual violence having about twice the odds of suicidal ideation (AOR 2.01 (1.21 – 3.36), $p < 0.05$) and over three times the odds of suicide attempts in the last year (AOR 3.71 (1.72 – 7.98), $p < 0.05$). The descriptive statistics documented in this report have already shown the high levels of both sexual violence and suicidality experienced by sexual and gender minority participants in our sample. However, the model results shown in Table 18 show strong associations between these two experiences, including the influence of post-traumatic stress in suicidal ideation. Additionally, our findings suggest that sexual and gender minority people experience discrimination when attempting to access healthcare, which may prevent those who need health services after violent incidents from seeking that care. Prioritising the provision of sensitive, accessible support services for sexual and gender minority people is urgent.

TABLE 18: Logistic regression models of adjusted odds ratio for suicidal ideation and suicide attempt in the past year: significant p-values only

	AOR	95% CI	p
Suicidal ideation (last year)			
Depression (CES-D 10 score)	1.14	1.08 – 1.20	<0.001
White	-	Reference category	
Black	0.57	0.34 – 0.97	0.039
No experience of sexual violence	-	Reference category	
Experienced sexual violence (lifetime)	2.01	1.21 – 3.36	0.008
Post-traumatic stress not indicated	-	Reference category	
Has signs of post-traumatic stress	2.15	1.32 – 3.50	0.002
Fieldworker-administered survey	-	Reference category	
Self-administered survey	2.08	1.23 – 3.51	0.006
Suicidal attempt (last year)			
Depression (CES-D 10 score)	1.07	1.00 – 1.14	0.038
White	-	Reference category	
Black	3.21	1.19 – 8.63	0.021
No experience of sexual violence	-	Reference category	
Experienced sexual violence (lifetime)	3.71	1.72 – 7.98	0.001
Does not have enough money to cover basic needs	-	Reference category	
Has enough money to cover basic needs	0.46	0.23 – 0.92	0.028

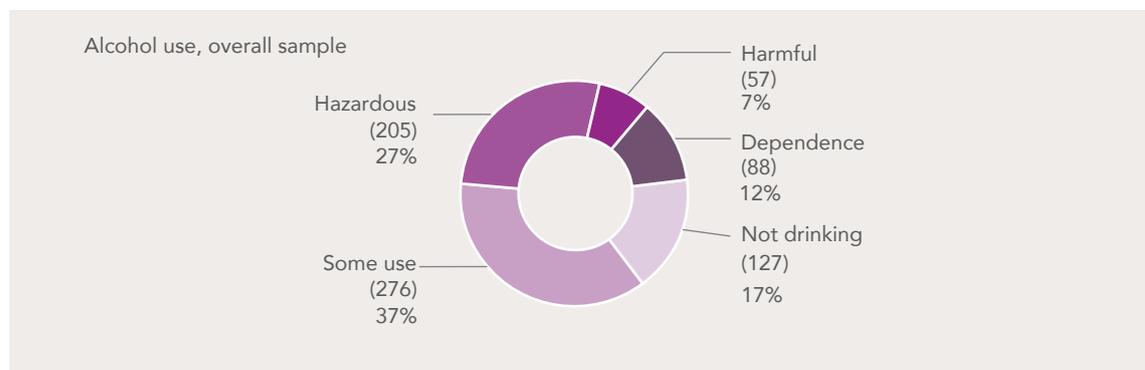
AOR: adjusted odds ratio; CI: confidence intervals;

Examining the number of completed suicides among sexual and gender minority people in South Africa was beyond the scope of this research, and limits the interpretation of our findings. However, our findings highlight that it is vital to acknowledge that sexual and gender minority South Africans are particularly vulnerable to suicidality. A review of current suicidality research in South Africa did not reveal any published academic articles that explore sexual and gender minority status.

Alcohol use

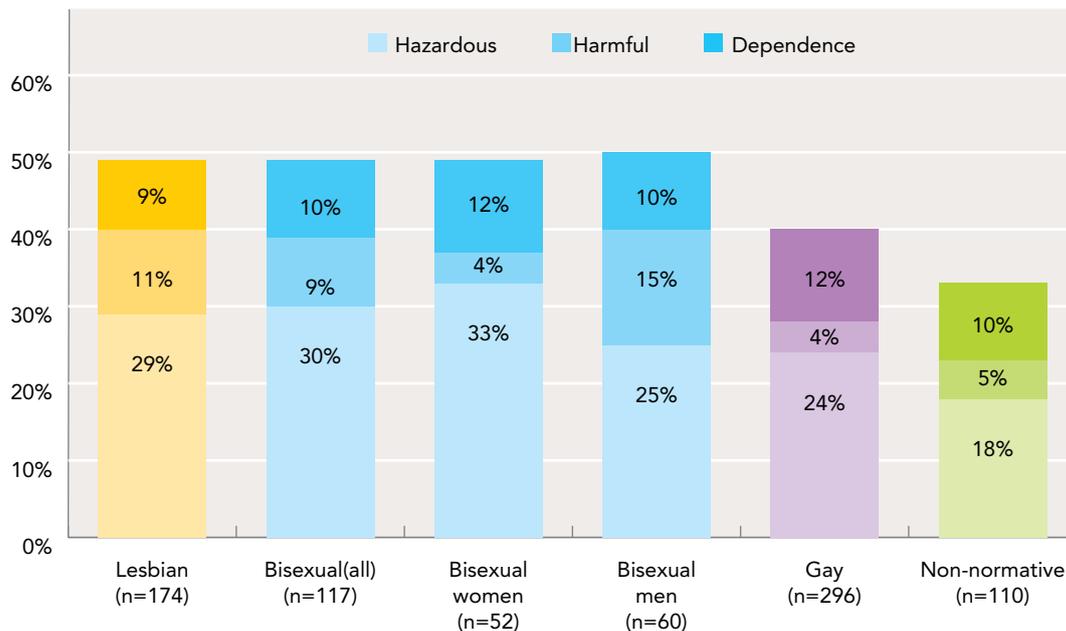
We used the 10-item AUDIT instrument to ask participants about how much alcohol they consume, and the impacts of their drinking on their lives. Figure 28 shows the levels of alcohol use in the overall sample. Only 17% of participants said they never drink alcohol. More than one in three participants drank some alcohol without health risks (276 of 753). However, almost half of our participants drank alcohol at a level that had risks for their health: 35% showed signs of hazardous or harmful alcohol use (262 of 753), and 12% showed signs of alcohol dependence (88 of 753).

Figure 28: Alcohol use, overall sample



When looking at alcohol use by sexual orientation, we found no large descriptive difference in the level of hazardous, harmful and dependence drinking between lesbian women (49%), bisexual people (49%) and gay men (40%; for details, see Table 21, Table 22, Table 23 and Figure 29). Unexpectedly, those with 'non-normative' sexual orientation had the lowest level of hazardous, harmful and dependence drinking (33%).

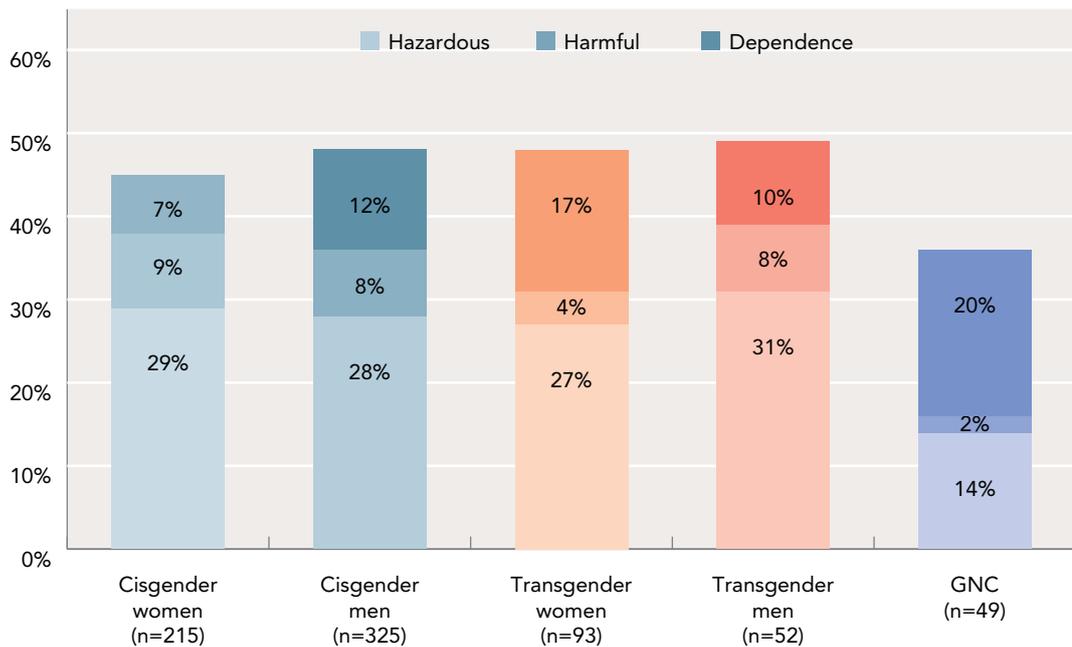
FIGURE 29: Alcohol use, by sexual orientation



We observed some differences in drinking between Black and White participants. While slightly more Black participants reported that they do not drink at all, among those who do drink, Black participants were considerably more likely to report signs of harmful alcohol use (including hazardous and dependence; 52% as opposed to 31% of White participants; $p < 0.05$).

When looking at alcohol use by gender identity (Figure 30 and Table 27), cisgender and gender minority people appeared to have relatively similar levels of drinking alcohol. We observed somewhat different patterns of drinking among gender minority identities: signs of alcohol dependence was highest among transgender women and gender non-conforming people. Among transgender women, one in six (17%) showed signs of alcohol dependency, and among gender non-conforming people this number rose to one in five (20%), despite gender non-conforming participants having the lowest overall harmful alcohol use (including hazardous and dependence).

FIGURE 30: Alcohol use, by gender identity



Alcohol use in our sample was much higher than what is known about the general South African population. In our group of participants, 83% said that they at least sometimes drink alcohol. In a representative study among the general South African population, which also used the AUDIT, only 28% of participants drank alcohol (Peltzer, Davids and Njuho, 2011). Another South African study with university students in Free State, found that 25% of participants drank alcohol (van Zyl *et al.*, 2015). The 2016 South Africa Demographic Health Survey documents higher levels of drinking, with 26% of women having ever drunk alcohol and 61% of men having ever drunk alcohol (National Department of Health *et al.*, 2017). The only South African study on alcohol use among a sexual or gender minority population, a study with men who have sex with men in Cape Town, found that 48% of participants drank alcohol at hazardous, harmful or dependence levels (Stoloff *et al.*, 2013). Our study confirms these elevated levels for gay men, which appear to be considerably higher than the cisgender, heterosexual South African population.

After adjustment¹² there was no difference between White and Black participants' alcohol use. In this model, we also found several other associations with harmful alcohol use. The negative association with age was very small, but more notably, those who had signs of post-traumatic stress and those who self-administered the survey were less likely to report harmful alcohol use. That who were lesbian, bisexual, gay or heterosexual were also more likely to use alcohol in a harmful way than those with a non-normative sexual orientation persisted in the logistic regression model (AOR 2.08 (1.25-3.45); $p < 0.05$). These associations are surprising, and we would have expected the opposite. A higher DUDIT score for drug use was slightly positively associated with harmful drinking, and lifetime experience of physical or sexual violence were more strongly positively associated with harmful drinking practices.

¹² In this logistic regression model, where the binary variable for AUDIT was the outcome, we adjusted for: depression (CES-D 10 score), anxiety (GAD-7 score), drug use (DUDIT score), socioeconomic status (employment, financial security, and housing), thinking about suicide in the last year, suicide attempt in the last year, lifetime experiences of sexual violence, lifetime experiences of physical violence, whether the survey was administered (filled out) by the participant or a fieldworker, race and age.

TABLE 19: Logistic regression model of adjusted odds ratios for harmful alcohol use: significant p-values only

Harmful alcohol use	AOR	95% CI	p
Age (years)	0.97	0.95 – 0.99	0.006
Drug use (DUDIT score)	1.04	1.01 – 1.06	0.003
Non-normative sexual orientation	-	Reference category	
Lesbian/Bisexual/Gay/Heterosexual	2.08	1.25 – 3.45	0.005
No suicide attempt in last year	-	Reference category	
Suicide attempt in last year	2.17	1.17 – 4.02	0.014
No experience of physical violence	-	Reference category	
Experienced physical violence (lifetime)	1.53	1.05 – 2.21	0.025
No experience of sexual violence	-	Reference category	
Experienced sexual violence (lifetime)	1.75	1.19 – 2.57	0.004
Post-traumatic stress not indicated	-	Reference category	
Has signs of post-traumatic stress	0.56	0.35 – 0.88	0.012
Fieldworker-administered survey	-	Reference category	
Self-administered survey	0.52	0.36 – 0.76	0.001

AOR: adjusted odds ratio; CI: confidence intervals;

At present there is a lack of data that is disaggregated by sexual orientation and gender identity in research on alcohol use (Flentje, Bacca and Cochran, 2015). International evidence on alcohol use among sexual minority people is somewhat mixed, although a 2008 systematic review shows that sexual minority people have higher levels of drinking than their heterosexual counterparts, and that sexual minority women may have more harmful use than sexual minority men (King *et al.*, 2008). It is unclear what motivates these differences or whether and how gender minority people were included in these studies.

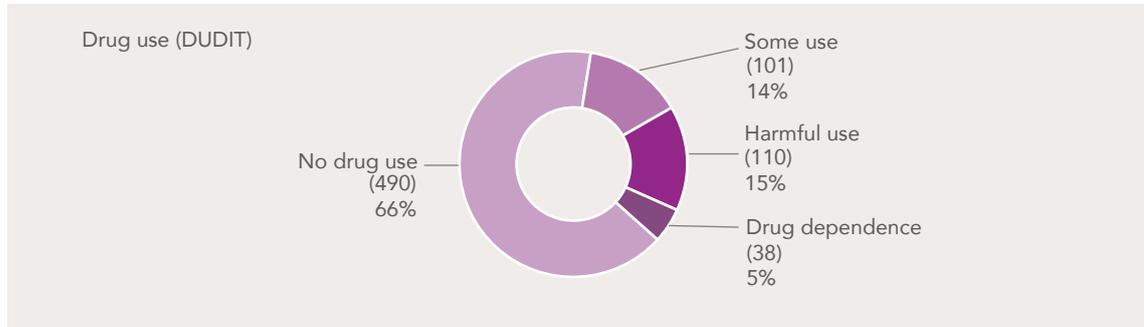
In recent years, several new alcohol research studies have been reported with gender minority people, though these have almost exclusively taken place in settings outside of the African continent. A few North American studies suggest that gender minority people are more likely to have harmful drinking practices than cisgender people, and that 'gender minority stressors' (Gonzalez *et al.* 2017) may be associated with elevated drinking habits (Coulter *et al.*, 2015; Scheim, Bauer and Shokoohi, 2016; Gonzalez, Gallego and Bockting, 2017).

Our findings confirm high levels of drinking among sexual and gender minority people, as studies from other settings and one study from South Africa have also found. In comparison to other data from South Africa where sexual orientation and gender identity were not reported, our sample of sexual and gender minority people reported much higher levels of drinking alcohol.

Drug use

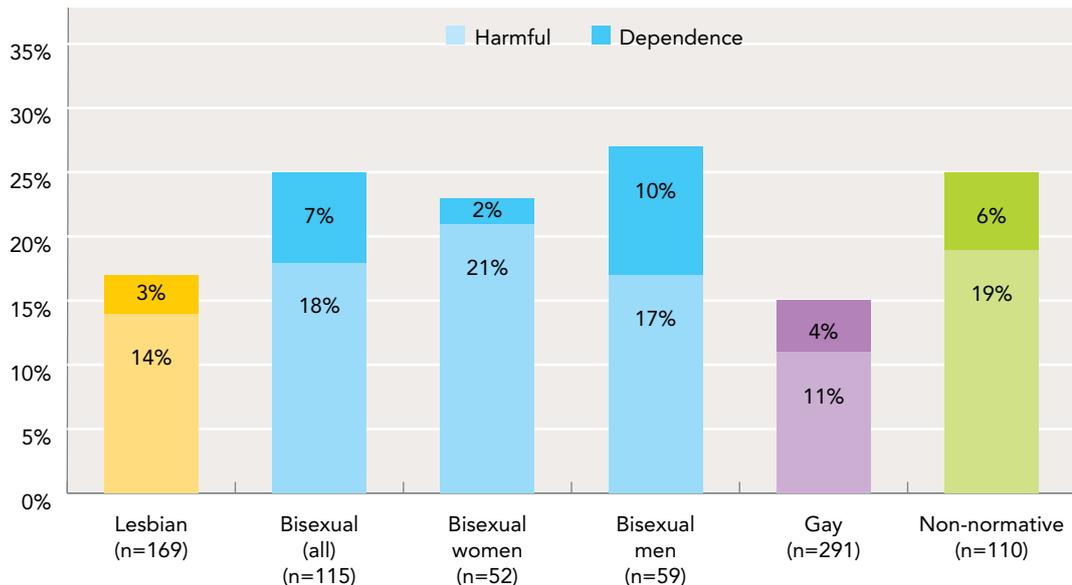
To measure levels of drug use among our sexual and gender minority sample, we used the DUDIT instrument (Figure 31). The majority of participants reported no drug use (66%), however, one in five participants reported harmful levels of drug use, including drug dependence.

FIGURE 31: Drugs use, overall sample



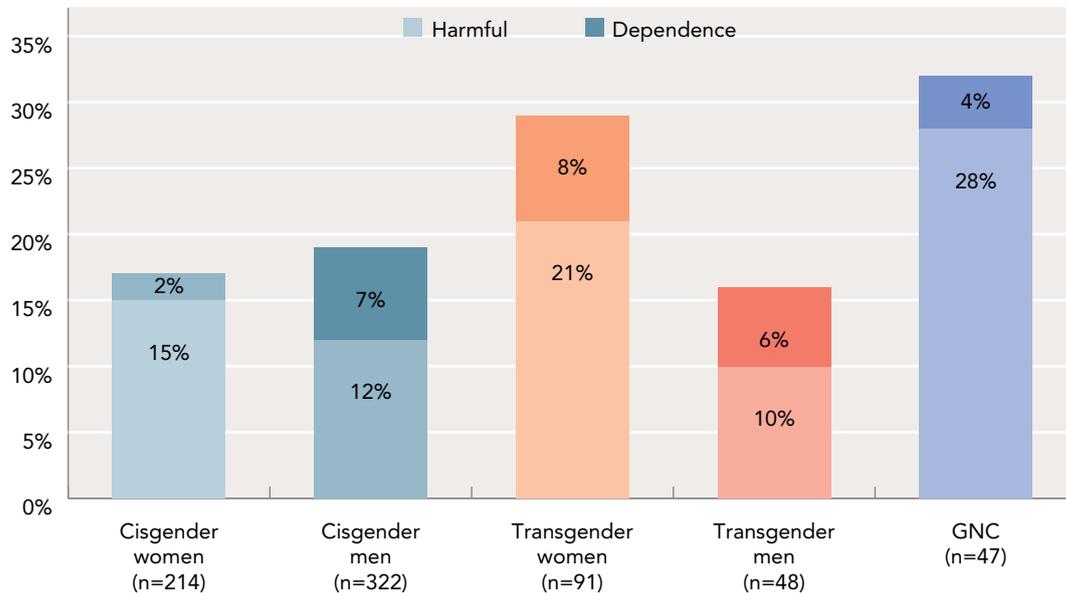
We saw some noticeable, though not significant, differences in drug use when examining sexual orientation and gender identity. Bisexual people and those with 'non-normative' sexual orientation had the highest reported level of harmful drug use and dependence (25% each) as compared to gay men (15%) and lesbian participants (17%) (Figure 32, for details see Table 21, Table 22 and Table 23). More bisexual women (46%) than bisexual men (37%) used drugs, however, bisexual men had more harmful and dependent use than bisexual women (27% compared to 23%) (Table 15, Figure 32).

FIGURE 32: Drug use, by sexual orientation



Among gender minority participants, gender non-conforming people reported the highest levels of harmful and dependent drug use (32%) as compared to transgender women (29%) and transgender men (16%) (Figure 33).

FIGURE 33: Drug use, by gender identity



A chi-squared test suggests that there are significant differences in drug use between Black and White participants. However, Black participants were not significantly more likely to use drugs harmfully or dependently at all (20% as compared to 19% in White participants).

Any difference by race disappeared after adjustment, though we noted some other associations.¹³ There was a slight positive association between alcohol and drug use. Lifetime experience of physical violence and living in informal housing persisted as risk factors for harmful drug use. Further, participants were significantly more likely to report alcohol use when they answered the survey themselves (self-administered) than when they filled it out with the help of a fieldworker. This suggests that without fearing judgement from a fieldworker, participants may be more open in self-reporting their drug use.

¹³ In this logistic regression model, where the binary variable for AUDIT was the outcome, we adjusted for: depression (CES-D 10 score), anxiety (GAD-7 score), alcohol use (AUDIT score), socioeconomic status (employment, financial security, and housing), thinking about suicide in the last year, suicide attempt in the last year, lifetime experiences of sexual violence, lifetime experiences of physical violence, whether the survey was administered (filled out) by the participant or a fieldworker, race and age.

TABLE 20: Logistic regression model of adjusted odds ratios for harmful drug use (DUDIT cut-off of 6): significant p-values only

Harmful drug use	AOR	95% CI	p
Alcohol use (AUDIT score)	1.05	1.03 – 1.08	<0.001
No experience of physical violence	-	Reference category	
Experienced physical violence (lifetime)	2.28	1.41 – 3.67	0.001
Informal housing or homeless	-	Reference category	
Formal housing	0.25	0.14 – 0.46	<0.001
Fieldworker-administered survey	-	Reference category	
Self-administered survey	1.86	1.15 – 3.02	0.012

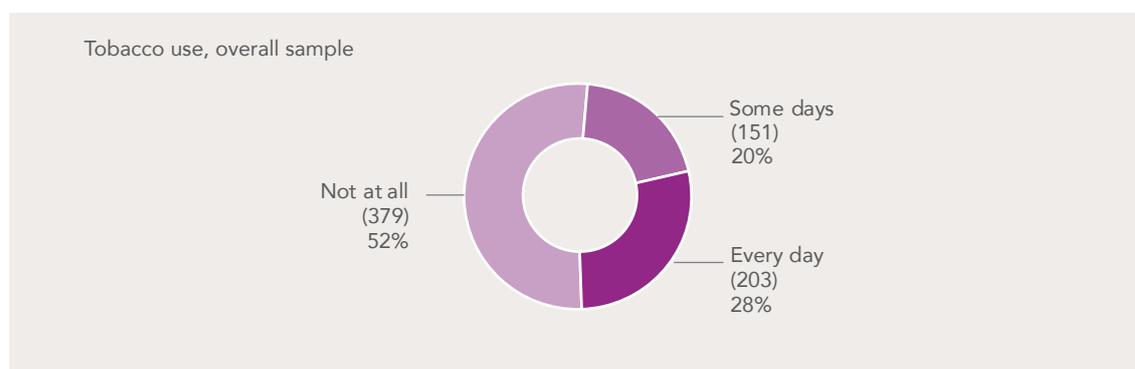
AOR: adjusted odds ratio; CI: confidence intervals;

As with alcohol, some research from other settings suggests that harmful drug use is more common among sexual and gender minority people than cisgender, heterosexual ones. Parental discomfort with homosexuality and being gender non-conforming in childhood have been found to be associated with higher substance-use rates (Rosario *et al.*, 2014).

Tobacco use

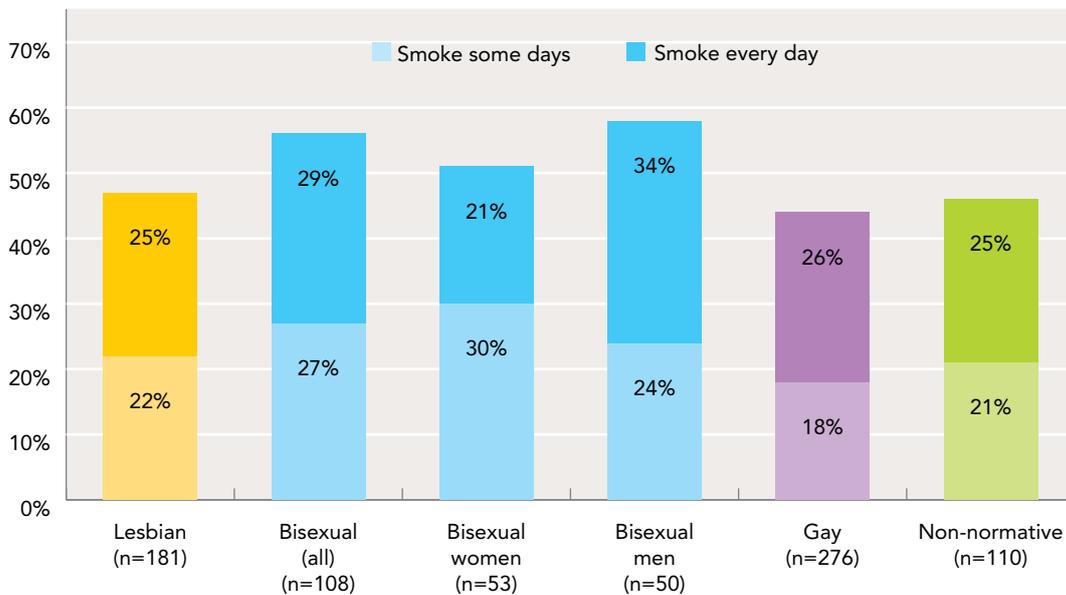
Almost half of all participants reported that they smoke tobacco. Some smoke every day (28%) and some only on some days (20%) (Figure 34).

FIGURE 34: Tobacco use, overall sample



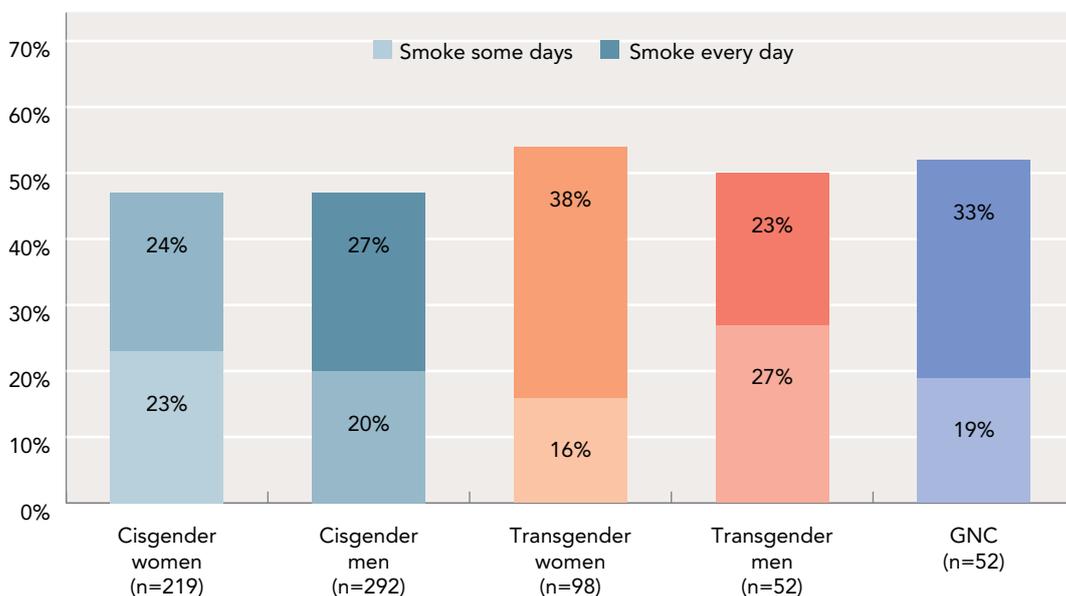
Levels of smoking in our sample showed small, but not statistically significant, differences between sexual orientations (Figure 35), gender identities (Figure 36) and Black and White participants (Table 15). Among bisexual people, there were more smokers than among lesbian and gay participants.

FIGURE 35: Tobacco use, by sexual orientation



Black participants and gender minority participants were a little more likely to smoke than White and cisgender participants in our sample (Figure 36).

FIGURE 36 Tobacco use, by gender identity



Compared to recent prevalence data on smoking among South African adults, our findings were high. The 2016 South Africa Demographic Health Survey, conducted in the South African general population, documents disparities in smoking between men and women, but does not mention sexual orientation or gender identity (National Department of Health *et al.*, 2017). In the general population survey, 7% of all women smoked tobacco products. By comparison, in our sample, 47% of lesbian and other women who have sex with women used tobacco, and 51% of bisexual women used tobacco. In the general population survey, 37% of all men smoked tobacco products.

In our sample, 44% of gay and other men who have sex with men, and 58% of bisexual men used tobacco. The levels of smoking in our sexual minority sample was thus much higher than in the general population: up to 7 times higher for women, and up to 1.5 times higher for men. The same holds for our gender minority sample: transgender women in our sample showed 7 times higher smoking rates than women in the general population; transgender men showed 1.3 times higher smoking levels than men in the general population.

International data on smoking and sexual and gender minority people is limited. What is available, though mostly from Western countries, confirms our South African findings that sexual and gender minority people have much higher rates of smoking tobacco than non-minorities (Blosnich, Lee and Horn, 2013; Lee *et al.*, 2014). Sexual minority people may have specific smoking risk factors, such as internalised homophobia and how they experience disclosure of their sexual orientation (Blosnich, Lee and Horn, 2013).

Experiences of violence and health outcomes of lesbian participants

Lesbian participants include any person of any gender who self-identified their sexual orientation as 'lesbian', cisgender women who identified as 'gay' and transgender women who self-identified as 'gay' and had sex with or were attracted exclusively to women. There were 203 lesbian participants in the sample. Figure 37 shows the gender identities of lesbian participants.

FIGURE 37: Gender identities of lesbian participants

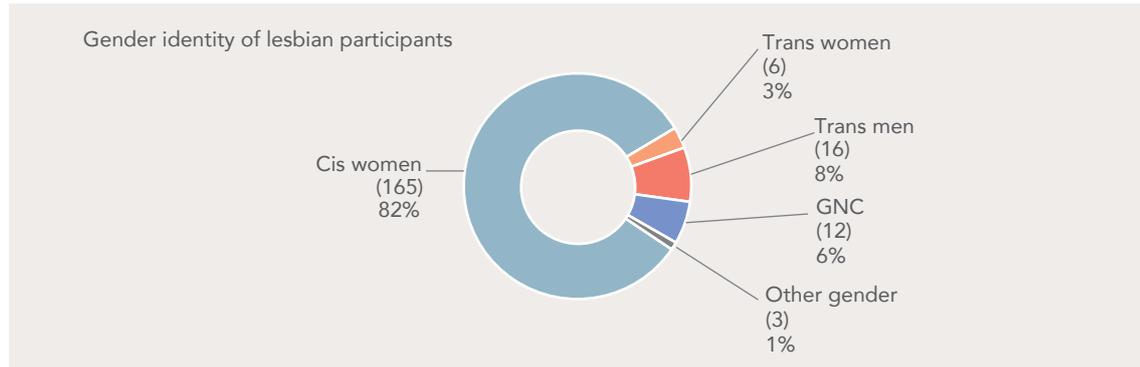


Table 21 shows the study findings for lesbian participants. More than half of lesbian participants were classified as depressed (52%), and more than one in four (28%) showed signs of moderate or severe anxiety. More than one in three (38%) had attempted suicide in their lifetime, and one in eight in the past year (13%). Half (49%) used alcohol in quantities that are harmful to their health, and almost one in six (17%) used drugs in a harmful way. Almost half (48%) used tobacco. Three quarters (75%) said that they had been verbally harassed for their sexual orientation or gender identity at some point in their life, and almost half (43%) in the past year. In their lifetime, almost half (48%) had experienced physical violence, and two in five (42%) had experienced sexual violence. One in five (22%) had experienced sexual violence by an intimate partner, and more than one in four (28%) physical violence by an intimate partner.

TABLE 21: Health outcomes and experiences of violence of lesbian participants

	n	%
Depression		
Depressed (based on CES-D 10) (n=181)	94	51.93
Ever been diagnosed with depression (n=168)	31	18.45
Of these, currently treated for depression (n=30)	14	46.67

	n	%
Anxiety (n=172)		
Categorical		
Participants with no signs of anxiety	65	37.79
Participants with signs of mild anxiety	59	34.30
Participants with signs of moderate anxiety	28	16.28
Participants with signs of severe anxiety	20	11.63
Binary		
No/mild anxiety	124	72.09
Moderate/severe anxiety	48	27.91
Ever been diagnosed with anxiety (n=170)	35	20.59
Of these, currently treated for anxiety (n=34)	17	50.00

Suicidality		
Suicidal ideation, lifetime (n=165)	96	58.18
Suicide attempt, lifetime (n=165)	65	39.39
Suicidal ideation, past year (n=149)	34	22.82
Suicide attempt, past year (n=152)	20	13.16

Alcohol use (n=174)		
Categorical		
No alcohol use	24	13.79
Some alcohol use	65	37.36
Hazardous use	50	28.74
Harmful use	20	11.49
Alcohol dependence	15	8.62
Binary		
No/some alcohol use	89	51.15
Hazard/Harm/ dependence	85	48.85

Drug use (n=169)		
Categorical		
No drug use	113	66.86
Some drug use	27	15.98
Harmful drug use	24	14.20
Drug dependence	5	2.96

	n	%
Binary		
No/some drug use	140	82.84
Harmful use/ dependence	29	17.16
Tobacco use (n=181)		
Don't smoke at all	95	52.49
Smoke some days	40	22.10
Smoke everyday	46	25.41
Verbal harassment for being LGBTI		
In lifetime (n=177)	131	74.01
Past year (n=160)	69	43.13
Sexual violence		
In lifetime (n=175)	74	42.29
Past year (n=173)	23	13.29
Physical violence		
In lifetime (n=174)	83	47.70
Past year (n=172)	25	14.53
Intimate partner, lifetime		
Sexual violence (n=172)	38	22.09
Physical violence (n=170)	48	28.24

Experiences of violence and health outcomes of gay participants

Gay participants include all cisgender and transgender men who self-identified as gay; cisgender or transgender men who identified their sexual orientation 'MSM', as well as transgender women who self-identified as gay and were attracted to and had sex with men (transgender women who self-identified as gay but were exclusively attracted to or having sex with women were not included here—see the section on lesbian participants). There were 328 gay participants in the sample. Figure 38 shows the gender identities of gay participants.

FIGURE 38: Gender identities of gay participants

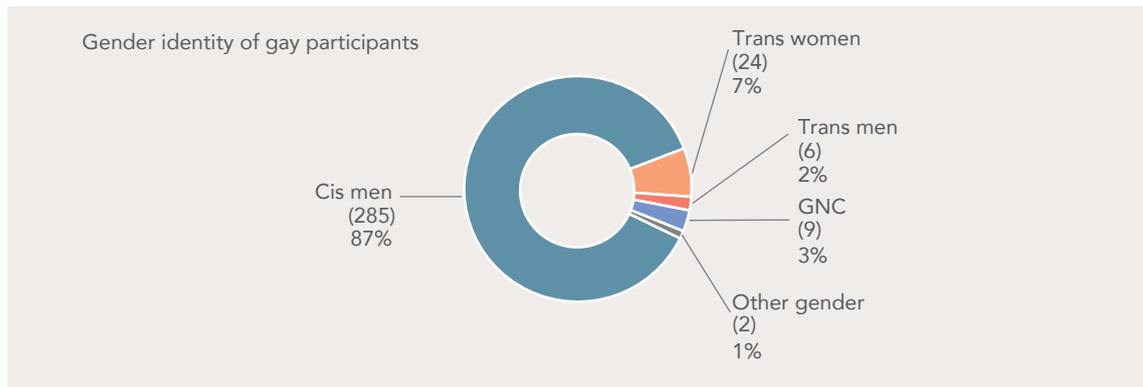


Table 22 shows the study findings for gay participants. Half of them were classified as depressed (50%), and one in four (27%) showed signs of moderate or severe anxiety. More than one in three (37%) had attempted suicide in their lifetime, and one in ten (10%) in the past year. Almost half (48%) used alcohol in a harmful way, and 15% used drugs in a harmful way. Almost half (44%) used tobacco. Three quarters (76%) said that they had been verbally harassed because of their sexual orientation or gender identity, more than half (54%) had experienced physical violence, and almost half (44%) had experienced sexual violence. Almost one in four (24%) had experienced sexual violence by an intimate partner, and almost one in three (31%) physical violence by an intimate partner.

TABLE 22: Health outcomes and experiences of violence of gay participants

	n	%
Depression		
Depressed (based on CES-D 10) (n=300)	149	49.67
Ever been diagnosed with depression (n=291)	50	17.18
Of these, currently treated for depression (n=46)	25	54.35

	n	%
Anxiety (n=297)		
Categorical		
Participants with no signs of anxiety	115	38.72
Participants with signs of mild anxiety	103	34.68
Participants with signs of moderate anxiety	58	19.53
Participants with signs of severe anxiety	21	7.07
Binary		
No/mild anxiety	218	73.40
Moderate/severe anxiety	79	26.60
Ever been diagnosed with anxiety (n=298)	50	16.78
Of these, currently treated for anxiety (n=43)	20	46.51

Suicidality		
Suicidal ideation, lifetime (n=286)	161	56.29
Suicide attempt, lifetime (n=282)	99	35.11
Suicidal ideation, past year (n=264)	52	19.70
Suicide attempt, past year (n=266)	26	9.77

Alcohol use (n=296)		
Categorical		
No alcohol use	53	17.91
Some alcohol use	100	33.78
Hazardous use	81	27.36
Harmful use	20	6.76
Alcohol dependence	42	14.19
Binary		
No/some alcohol use	153	51.69
Hazard/Harm/ dependence	143	48.31

Drug use (n=291)		
Categorical		
No drug use	213	73.20
Some drug use	34	11.68
Harmful drug use	33	11.34
Drug dependence	11	3.78

	n	%
Binary		
No/some drug use	247	84.88
Harmful use/ dependence	44	15.12

Tobacco use (n=276)		
Don't smoke at all	155	56.16
Smoke some days	49	17.75
Smoke everyday	72	26.09

Verbal harassment for being LGBTI		
In lifetime (n=299)	227	75.92
Past year (n=288)	107	37.15

Sexual violence (n=299)		
In lifetime	131	43.81
Past year	58	19.40

Physical violence		
In lifetime (n=297)	159	53.54
Past year (n=294)	62	21.09

Intimate partner, lifetime		
Sexual violence (n=298)	71	23.83
Physical violence (n=294)	91	30.95

Experiences of violence and health outcomes of bisexual participants

Bisexual participants include any person who self-identified as bisexual. We provide overall numbers for all bisexual participants, as well as numbers for bisexual women (cis- and transgender women) and bisexual men (cis- and transgender men). As Figure 39 shows, there were five bisexual participants who identified as gender non-conforming. Because this number is too small to meaningfully include in statistical analysis, we have not disaggregated the findings for gender non-conforming bisexual participants. They are, however, included in the group of all bisexual participants.

FIGURE 39: Gender identities of bisexual participants

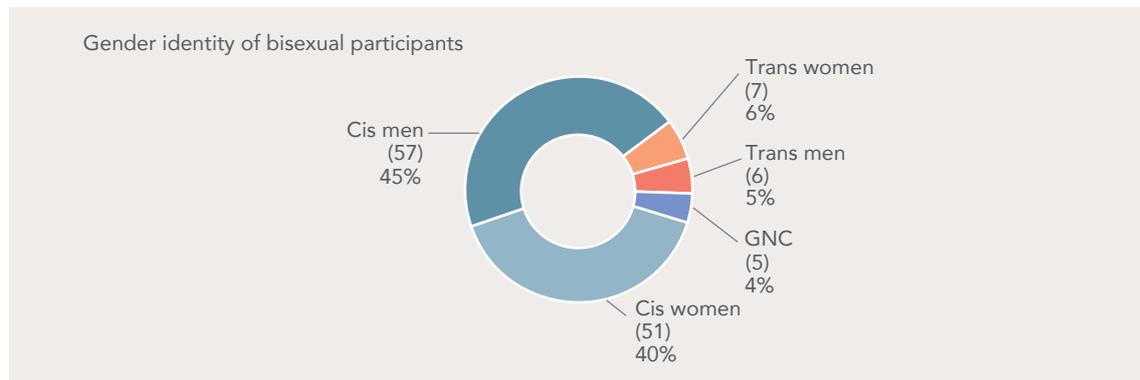


Table 23 shows the study findings for all bisexual participants, bisexual women and bisexual men. Two-thirds of all bisexual participants had signs of depression (65%), and almost half (47%) showed signs of moderate or severe anxiety. More than one third (38%) had attempted suicide in their lifetime. Half (50%) used alcohol at a level that might be harmful to their health, and one in four (25%) used other drugs in a harmful way. More than half (56%) used tobacco. More than half (58%) said that they had been verbally harassed for their sexual orientation or gender identity, the same number (58%) had experienced physical violence, and almost half (48%) had experienced sexual violence. A third (32%) had experienced sexual violence by an intimate partner, and more than a third (35%) had experienced physical violence by an intimate partner.

Bisexual participants had some of the highest levels of poor mental health outcomes in our entire sample of participants. When breaking this down by gender, bisexual women tended to have the highest levels of poor outcomes, higher than bisexual men. For example, 81% of bisexual women showed signs of clinical depression and 31% showed signs of severe anxiety, and these were statistically significantly higher than the levels of 51% and 8% of bisexual men ($p < 0.05$ for both). However, bisexual men had higher levels drug dependence than bisexual women, and more reported that they smoke every day, though these differences were not statistically significant.

Bisexual women

Four out of five bisexual women (81%) had signs of depression, and more than half (54%) showed signs of moderate or severe anxiety. Forty-two percent had attempted suicide in their lifetime. Half (48%) used alcohol at a level that might be harmful to their health, and one in four (23%) used other drugs in a harmful way. Half (51%) used tobacco. More than half (56%) said that they

had been verbally harassed for their sexual orientation or gender identity, or had experienced physical violence (59%), and almost two thirds (61%) had experienced sexual violence. Almost half (44%) had experienced sexual violence by an intimate partner, and a third (34%) had experienced physical violence by an intimate partner.

Bisexual men

Half of bisexual men (51%) had signs of depression, and more than a third (38%) showed signs of moderate or severe anxiety. One third (35%) had attempted suicide in their lifetime. Half (50%) used alcohol at a level that might be harmful to their health, and one in four (27%) used other drugs in a harmful way. More than half (58%) used tobacco. Almost two-thirds (61%) said that they had been verbally harassed for their sexual orientation or gender identity, and more than half had experienced physical violence (57%). One in three (33%) had experienced sexual violence. One in five (21%) had experienced sexual violence by an intimate partner, and more than one in three (36%) had experienced physical violence by an intimate partner.

TABLE 23: Health outcomes and experiences of violence of bisexual participants¹⁴

	All bisexual people (n=126)		Bisexual women (n=58)		Bisexual men (n=63)		p-value ¹⁵
	n	%	n	%	n	%	
Depression							
Depressed (based on CES-D 10)	(n=120)		(n=57)		(n=59)		
	78	65.00	46	80.70	30	50.85	0.001*
Ever been diagnosed with depression	(n=117)		(n=56)		(n=57)		
	35	29.91	24	42.86	10	17.54	0.003*
Of these, currently treated for depression	(n=33)		(n=23)		(n=9)		
	22	66.67	17	73.91	4	44.44	0.213
Anxiety	(n=116)		(n=54)		(n=58)		0.007*
Categorical							
Participants with no signs of anxiety	32	27.59	9	16.67	21	36.21	
Participants with signs of mild anxiety	31	26.72	16	29.63	15	25.86	
Participants with signs of moderate anxiety	31	26.72	12	22.22	17	29.31	
Participants with signs of severe anxiety	22	18.97	17	31.48	5	8.62	

14 Five participants identified their sexual orientation as bisexual and their gender identity as gender non-conforming or 'other'. These participants are included in the 'All bisexual people' column of Table 23, but due to small numbers are not disaggregated.

15 The p-values in Table 23 compare bisexual women and bisexual men.

	All bisexual people (n=126)		Bisexual women (n=58)		Bisexual men (n=63)		p-value ¹⁵
	n	%	n	%	n	%	
Binary							0.094
No/mild anxiety	63	54.31	25	46.30	36	62.07	
Moderate/severe anxiety	53	45.69	29	53.70	22	37.93	
Ever been diagnosed with anxiety	(n=120)		(n=56)		(n=60)		
	28	23.33	19	33.93	9	15.00	0.017*
Of these, currently treated for anxiety	(n=28)		(n=19)		(n=9)		
	16	57.14	14	73.68	2	22.22	0.017*

Suicidality							
Suicidal ideation, lifetime	(n=114)		(n=54)		(n=56)		
	78	68.42	43	79.63	32	57.14	0.011*
Suicide attempt, lifetime	(n=112)		(n=53)		(n=55)		
	43	38.39	22	41.51	19	34.55	0.456
Suicidal ideation, past year	(n=106)		(n=52)		(n=50)		
	35	33.02	24	46.15	9	18.00	0.002*
Suicide attempt, past year	(n=108)		(n=51)		(n=53)		
	6	5.56	3	5.88	3	5.66	1.000

Alcohol use	(n=117)		(n=52)		(n=60)		0.121
Categorical							
No alcohol use	17	14.53	5	9.62	12	20.00	
Some alcohol use	42	35.90	22	42.31	18	30.00	
Hazardous use	35	29.91	17	32.69	15	25.00	
Harmful use	11	9.40	2	3.85	9	15.00	
Alcohol dependence	12	10.26	6	11.54	6	10.00	
Binary							0.839
No/some alcohol use	59	50.43	27	51.92	30	50.00	
Hazard/Harm/dependence	58	49.57	25	48.08	30	50.00	

	All bisexual people (n=126)		Bisexual women (n=58)		Bisexual men (n=63)		p-value ¹⁵
	n	%	n	%	n	%	
Drug use	(n=115)		(n=52)		(n=59)		0.092
Categorical							
No drug use	66	57.39	28	53.85	37	62.71	
Some drug use	20	17.39	12	23.08	6	10.17	
Harmful drug use	21	18.26	11	21.15	10	16.95	
Drug dependence	8	6.96	1	1.92	6	10.17	
Binary							0.625
No/some drug use	86	74.78	40	76.92	43	72.88	
Harmful use/ dependence	29	25.22	12	23.08	16	27.12	

Tobacco use	(n=108)		(n=53)		(n=50)		0.316
Don't smoke at all	48	44.44	26	49.06	21	42.00	
Smoke some days	29	26.85	16	30.19	12	24.00	
Smoke everyday	31	28.70	11	20.75	17	34.00	

Verbal harassment for being LGBTI							
In lifetime	(n=122)		(n=57)		(n=61)		
	71	58.20	32	56.14	37	60.66	0.619
Past year	(n=116)						
	32	27.59	19	33.93	13	23.21	0.209

Sexual violence							
In lifetime	(n=122)		(n=57)		(n=61)		
	58	47.54	35	61.40	20	32.79	0.002*
Past year	(n=120)		(n=57)		(n=59)		
	21	17.50	12	21.05	9	15.25	0.417

Physical violence							
In lifetime	(n=122)		(n=57)		(n=61)		
	71	58.20	33	57.89	35	57.38	0.955
Past year	(n=121)		(n=57)		(n=60)		
	25	20.66	10	17.54	14	23.33	0.438

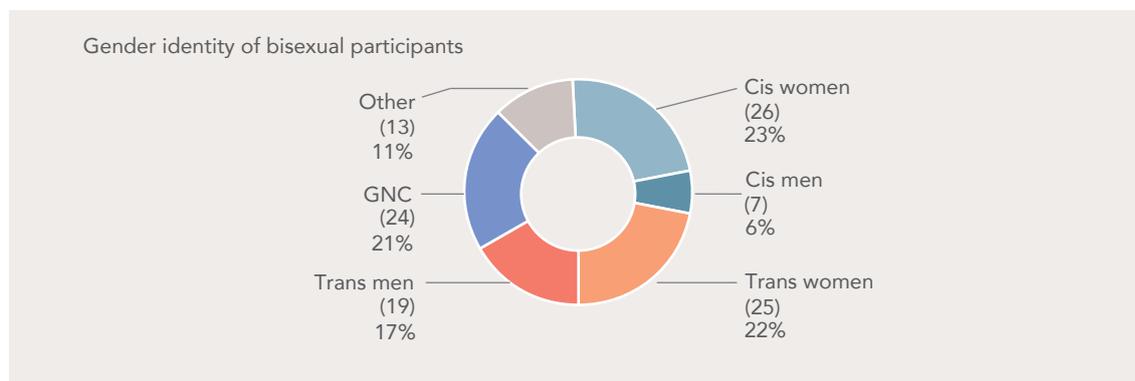
	All bisexual people (n=126)		Bisexual women (n=58)		Bisexual men (n=63)		p-value ¹⁵
	n	%	n	%	n	%	
Intimate partner violence, lifetime							
Sexual violence	(n=122)		(n=57)		(n=61)		
	39	31.97	25	43.86	13	21.31	0.009
Physical violence	(n=121)		(n=56)				
	42	34.71	19	33.93	22	36.07	0.809

Experiences of violence and health outcomes of participants with 'non-normative' sexual orientations

Participants were classified as having a 'non-normative' sexual orientation if we could not 'categorise' them as lesbian, gay, bisexual or heterosexual (see page 19 and page 29). In our sample, there were 114 participants with 'non-normative' sexual orientations (14% of our sample). These participants had a range of gender identities, of which 71% were gender minorities (Figure 40). Only 2% of cisgender men were categorised as 'non-normative' sexual orientation and 11% of cisgender women. Gender minority participants were more likely to be categorised as having a 'non-normative' sexual orientation, as 24% of trans women, 33% of trans men, 45% of gender non-conforming, and 72% of 'other' gender identities did so.

Given that a large proportion of the participants with 'non-normative' sexual orientation were also gender minorities, we provide both the descriptive statistics of all 'non-normative' sexual orientation participants, and also compare those who were gender minority with those who were cisgender (see table).

FIGURE 40: Gender identities of participants with 'non-normative' sexual orientations



Compared with other sexual orientations, participants with 'non-normative' sexual orientations had some of the poorest mental health outcomes in our study (see Table 24). Three in four (75%) of participants with 'non-normative' sexual orientations were classified as depressed, and half (51%) showed signs of moderate or severe anxiety. Three in four (77%) had thought of suicide in

their lifetime, and almost half (45%) had attempted suicide in their lifetime. One in ten (11%) had attempted suicide in the past year. Gender minority participants were significantly more likely to have attempted suicide than cisgender participants ($p < 0.05$). A third of participants with 'non-normative' sexual orientations (33%) used alcohol at levels that were harmful to their health; one in ten at levels of alcohol dependency (10%). One in four (25%) used drugs at harmful levels, and 46% used tobacco. More than two thirds (78%) had experienced verbal harassment due to their sexual orientation or gender identity, two thirds had experienced sexual violence (66%) or physical violence (66%). Two in five had experienced either sexual or physical violence by an intimate partner (40% and 38% respectively).

TABLE 24: Health outcomes and experiences of violence of participants with 'non-normative' sexual orientations

Participants with 'non-normative' sexual orientation	All (n=114)		Cisgender (n=33)		Gender minority (n=81)		p-value ¹⁶
	n	%	n	%	n	%	
Depression							
Depressed (based on CES-D 10)	(n=110)		(n=33)		(n=77)		
	82	74.55	25	75.76	57	74.03	0.848
Ever been diagnosed with depression	(n=108)		(n=31)		(n=77)		
	53	49.07	19	61.29	34	44.16	0.107
Of these, currently treated for depression	(n=51)		(n=17)		(n=34)		
	29	56.86	10	58.82	19	55.88	0.842
Anxiety							
Anxiety	(n=107)		(n=33)		(n=74)		0.953
Categorical							
Participants with no signs of anxiety	22	20.56	6	18.18	16	21.62	
Participants with signs of mild anxiety	30	28.04	10	30.30	20	27.03	
Participants with signs of moderate anxiety	24	22.43	8	24.24	16	21.62	
Participants with signs of severe anxiety	31	28.97	9	27.27	22	29.73	
Binary							0.988
No/mild anxiety	52	48.60	16	48.48	36	48.65	
Moderate/severe anxiety	55	51.40	17	51.52	38	51.35	

16 The p-values in Table 24 compare gender minority and cisgender participants who also identified with 'non-normative' sexual orientation.

Participants with 'non-normative' sexual orientation	All (n=114)		Cisgender (n=33)		Gender minority (n=81)		p-value ¹⁶
	n	%	n	%	n	%	
Ever been diagnosed with anxiety	(n=120)		(n=32)		(n=76)		0.083
	47	43.52	18	56.25	29	38.16	
Of these, currently treated for anxiety	(n=108)		(n=15)		(n=29)		0.908
	24	54.55	8	53.33	16	55.17	

Suicidality							
Suicidal ideation, lifetime	(n=107)		(n=31)		(n=76)		0.903
	82	76.64	24	77.42	58	76.32	
Suicide attempt, lifetime	(n=106)		(n=30)		(n=76)		0.047*
	48	45.28	9	30.00	39	51.32	
Suicidal ideation, past year	(n=104)		(n=29)		(n=75)		0.716
	46	44.23	12	41.38	34	45.33	
Suicide attempt, past year	(n=101)		(n=27)		(n=74)		0.034*
	11	10.89	0	0.00	11	14.86	

Alcohol use	(n=110)		(n=32)		(n=78)		0.528
Categorical							
No alcohol use	20	18.18	7	21.88	13	16.67	
Some alcohol use	54	49.09	17	53.13	37	47.44	
Hazardous use	20	18.18	6	18.75	14	17.95	
Harmful use	5	4.55	0	0.00	5	6.41	
Alcohol dependence	11	10.00	2	6.25	9	11.54	0.269
Binary							
No/some alcohol use	74	67.27	24	75.00	50	64.10	
Hazard/Harm/ dependence	36	32.73	8	25.00	28	35.90	

Drug use	(n=110)		(n=33)		(n=77)		0.098
Categorical							
No drug use	63	57.27	18	54.55	45	58.44	
Some drug use	19	17.27	5	15.15	14	18.18	
Harmful drug use	21	19.09	5	15.15	16	20.78	
Drug dependence	7	6.36	5	15.15	2	2.60	

Participants with 'non-normative' sexual orientation	All (n=114)		Cisgender (n=33)		Gender minority (n=81)		p-value ¹⁶
	n	%	n	%	n	%	
Binary							0.445
No/some drug use	82	74.55	23	69.70	59	76.62	
Harmful use/ dependence	28	25.45	10	30.30	18	23.38	

Tobacco use	(n=110)		(n=30)		(n=80)		0.070
Don't smoke at all	59	53.64	20	66.67	39	48.75	
Smoke some days	23	20.91	2	6.67	21	26.25	
Smoke everyday	28	25.45	8	26.67	20	25.00	

Verbal harassment for being LGBTI							
In lifetime	(n=109)		(n=33)		(n=76)		
	85	77.98	22	66.67	63	82.89	0.060
Past year	(n=107)		(n=33)		(n=74)		
	59	55.14	11	33.33	48	64.86	0.002*

Sexual violence							
In lifetime	(n=108)		(n=33)		(n=75)		
	71	65.74	21	63.64	50	66.67	0.760
Past year	(n=107)		(n=33)		(n=74)		
	23	21.50	7	21.21	16	21.62	0.962

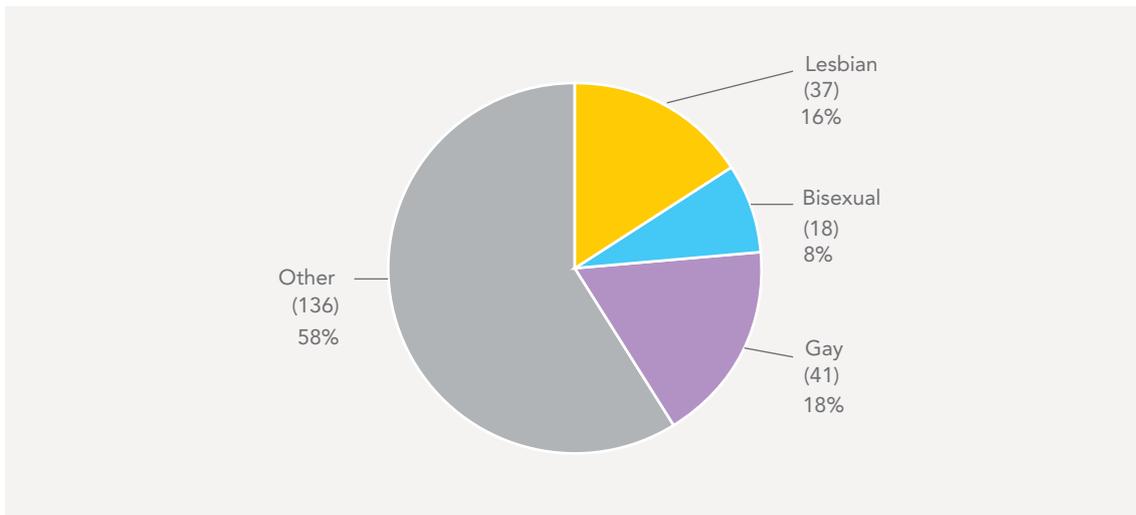
Physical violence							
In lifetime	(n=109)		(n=33)		(n=76)		
	72	66.06	21	63.64	51	67.11	0.725
Past year	(n=108)		(n=33)		(n=75)		
	23	21.30	9	27.27	14	18.67	0.314

Intimate partner violence. lifetime							
Sexual violence	(n=108)		(n=33)		(n=75)		
	43	39.81	13	39.39	30	40.00	0.953
Physical violence	(n=109)		(n=33)		(n=76)		
	41	37.61	14	42.42	27	35.53	0.495

Experiences of violence and health outcomes of gender minority participants

Gender minority participants include all participants who self-identified as transgender women, transgender men or gender non-conforming people. Additionally, it also includes all participants whose gender was different from the sex assigned at birth. Participants who selected 'other' gender identities and who were not cisgender are included in the overall number of gender minority people, but not reported as their own group due to their diversity and small numbers. Figure 41 shows the sexual orientations of gender minority participants.

FIGURE 41: Sexual orientations of gender minority participants



Access to and use of gender affirming care

It is worthwhile repeating the findings on gender affirming practices, as they relate directly to the health and well-being of transgender and gender non-conforming individuals. We asked gender minority participants about their access to and use of gender-affirming practices. To summarise the findings (detailed on page 34), half of participants who were assigned female at birth used binders (50%), more than two thirds of participants assigned male at birth tucked (71%), and just over one in four participants used hormones (28%). Participants were significantly more likely to report using hormones if they had medical aid or health insurance ($p < 0.05$).

TABLE 25: Gender affirming practices

Gender minority participants (n=232)		
	n	%
Binding (gender minorities assigned female at birth, n= 230)	49	50.00
Tucking (gender minorities assigned male at birth, n= 129)	91	70.54
Hormones (all gender minorities, n= 231)	64	27.95

Health outcomes

Table 26 shows the health outcomes for all gender minority people, as well as for transgender women, transgender men and gender non-conforming people. Overall, gender minority participants had experienced very high levels of violence, and showed high levels of mental health concerns, including suicidality and substance use. Compared to transgender men, gender non-conforming people and transgender women seemed to be more at risk for violence and mental health concerns.

Transgender women

Two thirds of transgender women (66%) were classified as depressed, and 39% showed signs of moderate or severe anxiety. Three in five (61%) had thought of suicide in their lifetime, and two in five (43%) had attempted suicide in their lifetime. One in seven (14%) had attempted suicide in the past year. Half (48%) used alcohol at levels that were harmful to their health; one in six at levels of alcohol dependency (17%). More than one in four (29%) used drugs at harmful levels, and 54% used tobacco. Four in five (80%) had experienced verbal harassment due to their gender identity, two thirds (67%) had experienced sexual violence, and 63% had experienced physical violence. More than two in five had experienced either sexual or physical violence by an intimate partner (44% and 42% respectively).

Transgender men

One in two transgender men (51%) was classified as depressed, and one in three (33%) showed signs of moderate or severe anxiety. Two thirds (66%) had thought of suicide in their lifetime, and two in five (41%) had attempted suicide in their lifetime. One in four (23%) had attempted suicide in the past year. Half (48%) used alcohol at levels that were harmful to their health; one in ten at levels of alcohol dependency (10%). One in six (17%) used drugs at harmful levels, and 49% used tobacco. Seventy-two percent had experienced verbal harassment due to their gender identity, half (50%) had experienced sexual violence, and 52% had experienced physical violence. More than one in three (37%) had experienced either sexual violence by an intimate partner, and 30% had experienced physical violence by an intimate partner.

Gender non-conforming people

Two thirds of gender non-conforming participants (65%) were classified as depressed, and 44% showed signs of moderate or severe anxiety. Three in four (77%) had thought of suicide in their lifetime, and more than half (54%) had attempted suicide in their lifetime. One in six (17%) had attempted suicide in the past year. A third (37%) used alcohol at levels that were harmful to their health; one in five at levels of alcohol dependency (20%). A third (32%) used drugs at harmful levels, and 52% used tobacco. Nine in ten (89%) had experienced verbal harassment due to their gender identity, and almost three in four had experienced sexual or physical (71% and 73% respectively). More than one in three had experienced sexual or physical violence by an intimate partner (38% for both).

TABLE 26: Health outcomes and experiences of violence of all gender minority participants, transgender women, transgender men and gender non-conforming participants

	All gender minority people (n=232)		Transgender women (n=104)		Transgender men (n=57)		GNC people (n=53)	
	n	%	n	%	n	%	n	%
Depression								
Depressed (based on CES-D 10)	(n=220)		(n=102)		(n=55)		(n=48)	
	138	62.73	67	65.69	28	50.91	31	64.58
Ever been diagnosed with depression	(n=211)		(n=98)		(n=50)		(n=48)	
	66	31.28	24	24.49	9	18.00	24	50.00
Of these, currently treated for depression	(n=63)		(n=23)		(n=7)		(n=24)	
	33	52.38	13	56.52	2	28.57	11	45.83
Anxiety	(n=208)		(n=95)		(n=51)		(n=48)	
Categorical								
Participants with no signs of anxiety	67	32.21	28	29.47	22	43.14	14	29.17
Participants with signs of mild anxiety	60	28.85	30	31.58	12	23.53	13	27.08
Participants with signs of moderate anxiety	37	17.79	15	15.79	8	15.69	11	22.92
Participants with signs of severe anxiety	44	21.15	22	23.16	9	17.65	10	20.83
Binary								
No/mild anxiety	127	61.06	58	61.05	34	66.67	27	56.25
Moderate/severe anxiety	81	38.94	37	38.95	17	33.33	21	43.75
Ever been diagnosed with anxiety	(n=210)		(n=97)		(n=50)		(n=48)	
	58	27.62	23	23.71	8	16.00	20	41.67
Of these, currently treated for anxiety	(n=54)		(n=22)		(n=6)		(n=19)	
	27	50.00	9	40.91	1	16.67	13	68.42

	All gender minority people (n=232)		Transgender women (n=104)		Transgender men (n=57)		GNC people (n=53)	
	n	%	n	%	n	%	n	%
Suicidality								
Suicidal ideation, lifetime	(n=213)		(n=100)		(n=50)		(n=48)	
	142	66.67	61	61.00	33	66.00	37	77.08
Suicide attempt, lifetime	(n=208)		(n=96)		(n=49)		(n=48)	
	95	45.67	41	42.71	20	40.82	26	54.17
Suicidal ideation, past year	(n=202)		(n=95)		(n=46)		(n=47)	
	73	36.14	29	30.53	16	34.78	20	42.55
Suicide attempt, past year	(n=201)		(n=95)		(n=44)		(n=47)	
	33	16.42	13	13.68	10	22.73	8	17.02

Alcohol use	(n=210)		(n=93)		(n=52)		(n=49)	
Categorical								
No alcohol use	40	19.05	20	21.15	11	21.15	7	14.29
Some alcohol use	74	35.24	28	30.11	16	30.77	24	48.98
Hazardous use	53	25.24	25	26.88	16	30.77	7	14.29
Harmful use	11	5.24	4	4.30	4	7.69	1	2.04
Alcohol dependence	32	15.24	16	17.20	5	9.62	10	20.41
Binary								
No/some alcohol use	114	54.29	48	51.61	27	51.92	31	63.27
Hazard/Harm/dependence	96	45.71	45	48.39	25	48.08	18	36.73

Drug use	(n=201)		(n=91)		(n=48)		(n=47)	
No drug use	126	62.69	59	64.84	35	72.92	23	48.94
Some drug use	25	12.44	6	6.59	5	10.42	9	19.15
Harmful drug use	38	18.91	19	20.88	5	10.42	13	27.66
Drug dependence	12	5.97	7	7.69	3	6.25	2	4.26
Binary								
No/some drug use	151	75.12	65	71.43	40	83.33	32	68.09
Harmful use/dependence	50	24.88	26	28.57	8	16.67	15	31.91

	All gender minority people (n=232)		Transgender women (n=104)		Transgender men (n=57)		GNC people (n=53)	
	n	%	n	%	n	%	n	%
Tobacco use	(n=218)		(n=98)		(n=51)		(n=52)	
Don't smoke at all	106	48.62	45	45.92	26	50.98	25	48.08
Smoke some days	43	19.72	16	16.33	13	25.49	10	19.23
Smoke everyday	69	31.65	37	37.76	12	23.53	17	32.69

Verbal harassment for being LGBTI								
In lifetime	(n=215)		(n=101)		(n=53)		(n=46)	
	170	79.07	81	80.20	38	71.70	41	89.13
Past year	(n=202)		(n=94)		(n=50)		(n=44)	
	113	55.94	54	57.54	21	42.00	29	65.91

Sexual violence								
In lifetime	(n=214)		(n=100)		(n=54)		(n=45)	
	133	62.15	67	67.00	27	50.00	32	71.11
Past year	(n=211)		(n=98)		(n=53)		(n=45)	
	61	28.91	34	34.69	15	28.30	11	24.44

Physical violence								
In lifetime	(n=214)		(n=100)		(n=54)		(n=45)	
	131	61.21	63	63.00	28	51.85	33	73.33
Past year	(n=211)		(n=97)		(n=53)		(n=46)	
	57	27.01	32	32.99	12	22.64	11	23.91

Intimate partner violence, lifetime								
Sexual violence	(n=214)		(n=100)		(n=54)		(n=45)	
	87	40.65	44	44.00	20	37.04	17	37.78
Physical violence			(n=100)		(n=54)		(n=45)	
	78	36.45	42	42.00	16	29.63	17	37.78

LIMITATIONS

This study has some limitations that should be kept in mind when reading the findings of this report.

First, because we recruited through organisations, we were likely to have participants who are already receiving some kind of services through these organisations. This means that the levels of mental health problems that we report might be higher than in a general sample of LGBTI people (Hendricks and Testa, 2012). We have tried to limit this potential over-estimation by also recruiting participants online, which in other studies has shown to reduce the over-estimation (Rosser *et al.*, 2007b). It is important to keep in mind, however, that even if the levels of mental health problems reported here are higher than among other LGBTI populations, they nevertheless present the current need for mental health support that our community partner organisations encounter through the services they offer.

Second, surveys that ask survivors of violence to report their experiences are likely to produce higher violence estimates than police-recorded administrative data. This is because often, violence is not reported to the police (which our findings confirm). Surveys with survivors of violence deal with incidents that not necessarily match the legal definition of a violent crime. Although data from surveys with survivors of violence are likely to elicit better disclosure of experiences of violence than data from police records, they can also be subject to undercounting, because some survivors may be reluctant to speak about their experiences. We have tried to reduce this potential under-estimation by collecting data through community partner organisations, with which many participants have a trustful relationship.

Third, we were faced with challenging decisions in how to categorise the diversity and complexity of sexual orientation and gender identity for the quantitative analysis. Based on the participatory methodology of this research, we used an in-depth discussion with South African partner organisations about the best way to do the categorisations. For example, a challenging decision was determining who should be included in the “lesbian” sexual orientation category. Although we considered categorising all transgender women who identified as gay to be “lesbian,” upon examination of these participants sexual behaviour and attraction, we noted that most gay transgender women strictly have sex with, and are attracted to, men. We therefore drew on sexual behaviour to make some coding decisions. We acknowledge that this may limit or bias our findings about lesbian people. We have worked to describe our methodology openly to allow for interpretation and critique of these findings.

Fourth, this is an exploratory study. Neither of our two sampling methods allow us to draw inferences beyond the constituency population, meaning we are not able to make predictions about larger LGBTI populations across the country or region. The findings from our study are therefore not representative of all LGBTI people in the participating countries.

Last, it is difficult to compare findings on LGBTI people’s health across studies nationally and internationally. This is because there is currently no standardized measure of measuring or identifying sexual orientation and gender identity. As others have observed (Bradford *et al.*, 2013), the “lack of a standardized methodology to measure self-reported experiences of direct

discrimination, lack of psychometric measures regarding validity or reliability of instruments, potential reporting biases and measurement error, and variability in assessing chronic and acute exposures, as well as intensity, duration, and frequency of exposure” (Krieger, 1999) limit the current research evidence that we have on topics of discrimination and mental health.

CONCLUSION

Despite the limitations, our study is the first cross-sectional South African study to describe levels of mental health specifically among sexual and gender minority people. It shows that LGBTI people are more likely to experience verbal harassment, physical and sexual violence than the general population, and face sexual orientation- and gender identity-related barriers when trying to access healthcare or assistance from police. LGBTI people, regardless of their specific sexual orientation or gender identity, have higher levels of depression, anxiety, suicidality, and substance use than the general population. The findings from our study confirm that in South Africa, as described in other parts of the world (Meyer, 2003; Hatzenbuehler *et al.*, 2014; Plöderl and Tremblay, 2015), social exclusion, marginalisation and stigma due to non-normative sexual orientation and/ or gender identity has a negative impact on the mental health and wellbeing of people who identify as lesbian, gay, bisexual, transgender or intersex.

In 2014, the African Commission for Human and People’s Rights (ACHPR) passed Resolution 275, which calls for the protection from violence based on real or perceived sexual orientation and gender identity and proposes specific obligations for African states (ACHPR, 2014). At a joint dialogue of the ACHPR, the Inter-American Commission on Human Rights and the UN, participants concluded that: “[d]ata and evidence is critical to understand the extent and gravity of violations and to advocate for the adoption of measures to prevent, address and redress human rights violations faced by [sexual and gender minorities]” (ACHPR, 2016). The findings from our study provide such data for South Africa, and evidence the seriousness of the rights violations against South Africans who identify as sexual or gender minorities, as well as the health consequences.

The disaggregation of our findings shows that compared to participants who are cisgender, gender minority participants showed higher rates of mental health concerns and had experienced more violence. This confirms existing literature that highlights the specific mental health risks and exposure to violence that are linked to gender identities that are not considered ‘the norm’ – transgender identities and gender non-conformity (Winter *et al.*, 2016). Among the heterogeneous group of sexual minorities, bisexual women show the worst mental health outcomes. Among the heterogeneous group of gender minorities, transgender women and gender non-conforming people face the highest mental health risks and risks of violence.

The findings from our study demonstrate the urgent need for mental health services that are affirming of sexual and gender diversity and are provided without sexual orientation and gender identity-related stigma, prejudice and discrimination. It is clear that affirming and non-judgmental mental healthcare services for sexual and gender minority people are at least as important as HIV-related health services. This is not just to improve mental health and wellbeing, but also to support efforts to decrease the vulnerability to HIV.

The high levels of violence experienced by sexual and gender minority people in South Africa also highlight the need for better access to justice (for people who decide to report such violence), and the need for non-judgmental support for sexual and gender minority survivors of violence. Our findings have shown that many LGBTI people experience physical or sexual violence, and that many think that this is violence targeted at them because of their sexual orientation and/or gender identity. This bias motivation needs to be identified and taken into account when people report violence. Lastly, more than half of the participants who had experienced violence show signs of posttraumatic stress. LGBTI survivors of violence need to have access to mental health services to support them in coping with the consequences of the violent experience. Further, LGBTI survivors of violence need support to report violence to state authorities, and to take such cases through the criminal justice system.

In summary, our report paints a sobering picture of the state of mental health and well-being of LGBTI people in South Africa. It underscores the responsibilities that government, NGOs, researchers and funders have to address both the health concerns and its underlying causes.

RECOMMENDATIONS

Recommendations for national government

- Take into account sexual and gender diversity when programming for gender issues, including gender-based violence;
- Improve access to mental health services for LGBTI populations:
 - Ensure that mental health services are affirming of sexual and gender diversity;
 - Ensure that mental health services are provided without sexual orientation and gender identity-related stigma, prejudice and discrimination;
 - We recommend following the guidelines on sexual and gender diversity published by the Psychological Association of South Africa;
 - Include mental health assessments, care and referrals into the HIV-related package of care for key populations.
- Build knowledge, skills and capacity within the public health sector to reduce sexual orientation and gender identity-related stigma, prejudice and discrimination in healthcare:
 - Provide mandatory sensitisation on sexual orientation, gender identity and expression, as well as values clarification, for healthcare providers at health facilities;
 - Provide continuous professional development education and training for healthcare providers to raise awareness of the mental health needs of LGBTI people in South Africa;
 - Include teaching on sexual orientation and gender identity-related health concerns into health professions education.
- Support the work of civil society organisations who provide services, including mental healthcare, for sexual and gender minorities.

Recommendations for civil society organisations

- For LGBTI civil society organisations:
 - Provide affirming counselling services for LGBTI people, and actively raise funds for such services;
 - Recognise that staff at LGBTI civil society organisations may have experiences with violence, or mental health concerns, and prioritise interventions and programmes for staff well-being;
 - Include mental health as an important aspect of the health of LGBTI people in advocacy, programming and outreach work;
 - Build relationships and referral services with mental healthcare providers who are willing to provide LGBTI-affirming services.
 - Continue advocacy, public awareness and values clarification work to address the

causes of violence, namely discrimination, stigma and prejudicial social and cultural attitudes.

- For civil society organisations providing services to survivors of violence:
 - Ensure that all staff, especially psychosocial and court support staff, are able to provide affirming services to LGBTI survivors of violence;
 - In gender-based violence advocacy and programming, take into account how sexual orientation, gender identity and expression can increase vulnerability to gender-based violence;
 - Actively build links to LGBTI civil society organisations.

Recommendations for donors

- Provide funding for services, programming and advocacy work linked to mental health and sexual orientation, gender identity and expression;
- Raise awareness of the need for mental health services and education for LGBTI people with other donors;
- Ensure that funds for violence prevention and programming build programmes that take into account vulnerabilities linked to sexual orientation, gender identity and expression, and are inclusive of people with diverse sexual orientations and gender identities and expressions.

Recommendations for academics and researchers

- Work with civil society organisations to establish research priorities and thematic areas, and fully and meaningfully involve civil society organisations in research projects:
 - Follow existing guidelines on how to work with LGBTI populations in health-related research, for example the *Guidelines for Conducting Participatory Social Research with Key Populations and Marginalised Communities* (KP Reach, 2018).
 - Meaningfully include civil society organisations in the development of research proposals, including in budget items.
- Include demographic data on sexual orientation and gender identity and expression in population-based studies, in order to expand the knowledge base on sexual orientation, gender identity and expression and health.
- Conduct research, in partnership with civil society organisations, to further understand the mental health and well-being of LGBTI populations in South Africa.
- Disaggregate data by sexual orientations and gender identities to allow a nuanced understanding of the health concerns of sexual and gender minority populations.

Recommendations for healthcare providers

- Ensure that your health services are affirming of sexual and gender diversity, and are provided without sexual orientation and gender identity-related stigma, prejudice or discrimination – we recommend following the guidelines on sexual and gender diversity published by the Psychological Association of South Africa;
- Be aware of, and screen for, mental health concerns among patients who identify as LGBTI;
- Include mental health assessments into HIV-related healthcare for key populations;
- Become an advocate for LGBTI patients, raise awareness of their healthcare needs and challenge sexual orientation and gender identity and expression-related prejudice among colleagues.

REFERENCES

- Academy of Science of South Africa (2015) *Diversity in Human Sexuality: Implications for Policy in Africa*. Pretoria. Available at: <https://www.assaf.org.za/files/8-June-Diversity-in-human-sexuality1.pdf>.
- African Commission on Human and Peoples' Rights (2014). 275: *Resolution on Protection against Violence and other Human Rights Violations against Persons on the basis of their real or imputed Sexual Orientation or Gender Identity*. Banjul, Gambia: ACHPR.
- African Commission on Human and Peoples' Rights (2016). *Ending violence and other human rights violations based on sexual orientation and gender identity: A joint dialogue of the African Commission on Human and Peoples' Rights, Inter-American Commission on Human Rights and United Nations*. Pretoria: ACHPR.
- Ambani, J. O. (2017) 'A triple heritage of sexuality? Regulation of sexual orientation in Africa in historical perspective', in Namwase, S. and Jjuuko, A. (eds) *Protecting the Human Rights of Sexual Minorities in Contemporary Africa*. Pretoria: Pretoria University Law Press (PULP), pp. 14–51.
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- amfAR, International AIDS Vaccine Initiative, Johns Hopkins University - Center for Public Health and Human Rights, United Nations Development Programme (2015). *Respect Protect Fulfill: Best practices guidance in conducting HIV research with gay, bisexual, and other men who have sex with men (MSM) in rights- constrained environments*. amfAR.
- Amon, J.J., Baral, S.D., Beyrer, C., Kass, N.E. (2012). 'Human Rights Research and Ethics Review: Protecting Individuals or Protecting the State?' *PLOS One*, 9:e1001325.
- Baral, S. et al. (2009) 'HIV prevalence, risks for HIV infection, and human rights among men who have sex with men (MSM) in Malawi, Namibia, and Botswana.', *PloS one*, 4(3), p. e4997. doi: 10.1371/journal.pone.0004997.
- Barbor, T. F. et al. (2001) 'AUDIT: The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care. Second Edition.' Geneva: World Health Organization Department of Mental Health and Substance Dependence. Available at: http://apps.who.int/iris/bitstream/10665/67205/1/WHO_MSD_MSB_01.6a.pdf.
- Bazargan, M. and Galvan, F. (2012) 'Perceived discrimination and depression among low-income Latina male-to-female transgender women.', *BMC public health*. BioMed Central, 12, p. 663. doi: 10.1186/1471-2458-12-663.
- Berman, A. H. et al. (2003) 'DUDIT The Drug Use Disorders Identification Test Manual'. Stockholm: Karolinska Institutet, Department of Clinical Neuroscience, Section for Alcohol and Drug Dependence Research. Available at: <https://www.paihdelinkki.fi/sites/default/files/duditmanual.pdf>.
- Better, A. and Simula, B. (2015) 'How and for whom does gender matter ? Rethinking the concept of sexual orientation', *Sexualities*, 18(5/6), pp. 665–680. doi: 10.1177/1363460714561716.
- Bhugra, D. et al. (2016) 'WPA Position Statement on Gender Identity and Same-Sex Orientation, Attraction and Behaviours', *World Psychiatry*, 15(3), pp. 299–300. doi: 10.1002/wps.20340.
- Blondeel, K. et al. (2018) 'Violence motivated by perception of sexual orientation and gender identity: a systematic review', *Bulletin of the World Health Organization*, 96(1), p. 29–41L.
- Blosnich, J., Lee, J. G. L. and Horn, K. (2013) 'A systematic review of the aetiology of tobacco disparities for sexual minorities.', *Tobacco control*. NIH Public Access, 22(2), pp. 66–73. doi: 10.1136/tobaccocontrol-2011-050181.
- Bockting, W. O. et al. (2013a) 'Stigma, Mental Health, and Resilience in an Online Sample of the US Transgender Population', *American Journal of Public Health*, 103(5), pp. 943–951. doi: 10.2105/AJPH.2013.301241.
- Bockting, W. O. et al. (2013b) 'Stigma, Mental Health, and Resilience in an Online Sample of the US Transgender Population', *American Journal of Public Health*, 103(5), pp. 943–951. doi: 10.2105/AJPH.2013.301241.
- Bradford, J. et al. (2013) 'Experiences of transgender-related discrimination and implications for health: Results from the Virginia transgender health initiative study', *American Journal of Public Health*, 103(10), pp. 1820–1829. doi: 10.2105/AJPH.2012.300796.
- Breen, D. & Nel, J.A., 2011. South Africa - A home for all? The need for hate crime legislation. *South African Crime Quarterly*, (38), pp.33-43.
- Burrows, S., Vaez, M. and Laflamme, L. (2007) 'Sex-specific suicide mortality in the South African urban context: The role of age, race, and geographical location', *Scandinavian Journal of Public Health*, 35(2), pp. 133–139. doi: 10.1080/14034940600975773.
- Calton, J. M., Cattaneo, L. B. and Gebhard, K. T. (2015) 'Barriers to Help Seeking for Lesbian, Gay, Bisexual, Transgender, and Queer Survivors of Intimate Partner Violence.', *Trauma, violence & abuse*, (MAY), p. 1524838015585318-. doi: 10.1177/1524838015585318.
- Carroll, A. and Mendos, L. R. (2017) *State-Sponsored Homophobia - A world survey*

- of sexual orientation laws: Criminalisation, protection and recognition. Geneva. Available at: http://ilga.org/downloads/02_ILGA_State_Sponsored_Homophobia_2016_ENG_WEB_150516.pdf.
- Chishinga, N. et al. (2011) 'Validation of brief screening tools for depressive and alcohol use disorders among TB and HIV patients in primary care in Zambia', *BMC Psychiatry*. BioMed Central, 11(1), p. 75. doi: 10.1186/1471-244X-11-75.
- Clinic, M. (2017) *Anxiety: Symptoms & causes*. Available at: <https://www.mayoclinic.org/diseases-conditions/anxiety/symptoms-causes/syc-20350961> (Accessed: 6 December 2017).
- Cole, B., and L. Han. (2011) *Freeing Ourselves: A Guide to Health and Self Love for Brown Bois*. Oakland: Brown Boi Project.
- Coulter, R. W. S. et al. (2015) 'Differences in alcohol use and alcohol-related problems between transgender- and nontransgender-identified young adults', *Drug and Alcohol Dependence*, 154, pp. 251–259. doi: 10.1016/j.drugalcdep.2015.07.006.
- Cruz, T. M. (2014) 'Assessing access to care for transgender and gender nonconforming people: A consideration of diversity in combating discrimination', *Social Science & Medicine*, 110, pp. 65–73. doi: 10.1016/j.socscimed.2014.03.032.
- De Cuypere, G. and Winter, S. (2016) 'A gender incongruence diagnosis: where to go?', *The Lancet Psychiatry*, 3(9), pp. 796–797. doi: 10.1016/S2215-0366(16)30212-7.
- Drescher, J. (2015) 'Queer diagnoses revisited: The past and future of homosexuality and gender diagnoses in DSM and ICD', *International Review of Psychiatry*, 27(5), pp. 386–395. doi: 10.3109/09540261.2015.1053847.
- Ekins, R., and D. King. (2006) *The Transgender Phenomenon*. Thousand Oaks, CA: SAGE.
- Flaherty, J. A. et al. (1988) 'Developing Instruments for Cross-Cultural Psychiatric Research', *The Journal of Nervous and Mental Disease*, 176(5), pp. 260–263. doi: 10.1097/00005053-198805000-00001.
- Flentje, A., Bacca, C. L. and Cochran, B. N. (2015) 'Missing data in substance abuse research? Researchers' reporting practices of sexual orientation and gender identity', *Drug and Alcohol Dependence*. Elsevier, 147, pp. 280–284. doi: 10.1016/J.DRUGALCDEP.2014.11.012.
- Frost, D. M. and Meyer, I. H. (2009) 'Internalized Homophobia and Relationship Quality among Lesbians, Gay Men, and Bisexuals.', *Journal of counseling psychology*. NIH Public Access, 56(1), pp. 97–109. doi: 10.1037/A0012844.
- GATE (2017) *Submission by GATE to the World Health Organization : Intersex codes in the International Classification of Diseases (ICD) 11 Beta Draft*. New York: GATE.
- Gergen, K. J. (2001) 'Psychological science in a postmodern context', *American Psychologist*, 56(10), pp. 803–813. doi: 10.1037//0003-066X.56.10.803.
- Gonzalez, C. A., Gallego, J. D. and Bockting, W. O. (2017) 'Demographic Characteristics, Components of Sexuality and Gender, and Minority Stress and Their Associations to Excessive Alcohol, Cannabis, and Illicit (Noncannabis) Drug Use Among a Large Sample of Transgender People in the United States', *The Journal of Primary Prevention*, 38(4), pp. 419–445. doi: 10.1007/s10935-017-0469-4.
- Haas, A. P. et al. (2010) 'Suicide and Suicide Risk in Lesbian, Gay, Bisexual, and Transgender Populations: Review and Recommendations', *Journal of Homosexuality*, 58(1), pp. 10–51. doi: 10.1080/00918369.2011.534038.
- Hatzenbuehler, M. L. et al. (2010) 'The impact of institutional discrimination on psychiatric disorders in lesbian, gay, and bisexual populations: A prospective study', *American Journal of Public Health*, 100(3), pp. 452–459. doi: 10.2105/AJPH.2009.168815.
- Hatzenbuehler, M. L. (2011) 'The Social Environment and Suicide Attempts in Lesbian, Gay, and Bisexual Youth', *Pediatrics*, 127(5), pp. 896–903. doi: 10.1542/peds.2010-3020.
- Hatzenbuehler, M. L. et al. (2014) 'Structural stigma and all-cause mortality in sexual minority populations', *Social Science and Medicine*, 103, pp. 33–41. doi: 10.1016/j.socscimed.2013.06.005.
- Hatzenbuehler, M.L. et al., 2018. Corrigendum to 'Structural stigma and all-cause mortality in sexual minority populations'; [Soc. Sci. Med. 103 (2014) 33-41]. *Social Science & Medicine*, 200, p.271.
- Hatzenbuehler, M. L., Keyes, K. M. and Hasin, D. S. (2009) 'State-level policies and psychiatric morbidity in lesbian, gay, and bisexual populations', *American Journal of Public Health*, 99(12), pp. 2275–2281. doi: 10.2105/AJPH.2008.153510.
- Hendricks, M. L. and Testa, R. J. (2012) 'A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the minority stress model', *Professional Psychology: Research and Practice*, 43(5), pp. 460–467. doi: 10.1037/a0029597.
- Herbst, J. H. et al. (2008) 'Estimating HIV Prevalence and Risk Behaviors of Transgender Persons in the United States: A Systematic Review', *AIDS and Behavior*, 12(1), pp. 1–17. doi: 10.1007/s10461-007-9299-3.
- Herek, G. M., Gillis, J. R. and Cogan, J. C. (2009) 'Internalized stigma among sexual minority adults: Insights from a social psychological perspective.', *Journal of Counseling Psychology*, 56(1), pp. 32–43. doi: 10.1037/a0014672.

- Herman, A., Stein, D., et al. (2009) 'The South African Stress and Health (SASH) study: 12-month and lifetime prevalence of common mental disorders', *South African Medical Journal*, 99(5), pp. 339–344. Available at: http://www.scielo.org.za/scielo.php?pid=S0256-95742009000500022&script=sci_arttext&lng=pt (Accessed: 6 December 2017).
- Herman, A., Stein, D. J., et al. (2009) 'The South African Stress and Health (SASH) study: 12-month and lifetime prevalence of common mental disorders', *SAMJ: South African Medical Journal*, 99(5), pp. 339–344.
- Institute of Medicine, 2011. *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington DC: Institute of Medicine.
- Israel, B. A. et al. (1998) 'Review of Community-Based Research: Assessing Partnership Approaches to Improve Public Health', *Annual Review of Public Health*, 19(1), pp. 173–202. doi: 10.1146/annurev.publhealth.19.1.173.
- Israel, B. A. et al. (2010) 'Community-based participatory research: A capacity-building approach for policy advocacy aimed at eliminating health disparities', *American Journal of Public Health*, 100(11), pp. 2094–2102. doi: 10.2105/AJPH.2009.170506.
- James, S.E. et al., 2016. *The Report of the 2015 U.S. Transgender Survey*, Washington, DC: National Center for Transgender Equality.
- Kara, S., 2017. *Gender is not an illness: How pathologizing trans people violates international human rights law*. Berlin: GATE.
- King, M. et al. (2008) 'A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people', *BMC Psychiatry*. BioMed Central, 8(1), p. 70.
- KP Reach (2018). 'Guidelines for Conducting Participatory Social Research with Key Populations and Marginalised Communities'. Available online at: <https://kpreach.net/resources/#guidelines> (accessed 11 May 2019).
- Krieger, N., 2012. Methods for the scientific study of discrimination and health: An ecosocial approach. *American Journal of Public Health*, 102(5), pp.936–945.
- Krieger, N., 1999. Embodying inequality: a review of concepts, measures, and methods for studying health consequences of discrimination. *International Journal of Health Services*, 29(2), pp.295-352.
- Kroenke, K., Spitzer, R. L. and Williams, J. B. (2001) 'The PHQ-9: validity of a brief depression severity measure.', *Journal of general internal medicine*. Springer, 16(9), pp. 606–13. doi: 10.1046/J.1525-1497.2001.016009606.X.
- Krug, E. E. G. et al. (2002) *The world report on violence and health*, World Health Organization. Geneva. doi: 10.1136/ip.9.1.93.
- Kuiper, B. and Cohen-Kettenis, P. (1988) 'Sex reassignment surgery. A study of 141 Dutch transsexuals', *Archives of Sexual Behavior*, 17(5), pp. 439–457.
- Lane, T. et al. (2011) 'High HIV prevalence among men who have sex with men in Soweto, South Africa: results from the Soweto Men's Study.', *AIDS and Behavior*, 15(3), pp. 626–34.
- Lee, J.G.L. et al., 2014. Promotion of tobacco use cessation for lesbian, gay, bisexual, and transgender people: a systematic review. *American Journal of Preventive Medicine*, 47(6), pp.823–31.
- Leung, M. W., Yen, I. H. and Minkler, M. (2004) 'Community-based participatory research: A promising approach for increasing epidemiology's relevance in the 21st century', *International Journal of Epidemiology*, 33(3), pp. 499–506.
- Logie, C. (2012) 'The case for the World Health Organization's Commission on the Social Determinants of Health to address sexual orientation.', *American Journal of Public Health*, 102(7), pp. 1243–6.
- Machisa, M. et al. (2011) *The war at home: Gender based violence indicators project: Gauteng Research Report*. Johannesburg: Gender Links.
- Marshall, B. D. L. et al. (2016) 'Prevalence and Correlates of Lifetime Suicide Attempts Among Transgender Persons in Argentina', *Journal of Homosexuality*, 63(7), pp. 955–967.
- Matebeni, Z. et al. (2013a) "'I thought we are safe": Southern African lesbians' experiences of living with HIV.', *Culture, Health & Sexuality*, 15 Suppl, pp. 34–47.
- Mayer, K. H. et al. (2008) 'Sexual and gender minority health: what we know and what needs to be done.', *American Journal of Public Health*, 98(6), pp. 989–95.
- Mayosi, B. M. and Benatar, S. R. (2014) 'Health and health care in South Africa--20 years after Mandela.', *The New England journal of medicine*, 371(14), pp. 1344–53.
- Meer, T. and Müller, A. (2017) "'They treat us like we're not there": Queer bodies and the social production of healthcare spaces', *Health & Place*, 45, pp. 92–98.
- Meyer, I. H. (1995) 'Minority Stress and Mental Health in Gay Men', *Journal of Health and Social Behavior*. American Sociological Association, 36(1), p. 38.
- Meyer, I. H. (2003) 'Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence.', *Psychological bulletin*, 129(5), pp. 674–697.

- Meyer, I. H. and Wilson, P. A. (2009) 'Sampling Lesbian, Gay, and Bisexual Populations', *Journal of Counseling Psychology*, 56(1), pp. 23–31.
- Mkhize, N. et al. (2010) *The country we want to live in - Hate crimes and homophobia in the lives of black lesbian South Africans*. Cape Town: HSRC Press.
- Müller, A. (2013) 'Teaching lesbian, gay, bisexual and transgender health in a South African health sciences faculty: addressing the gap.', *BMC Medical Education*, 13, p. 174.
- Müller, A. (2016) 'Health for All? Sexual Orientation, Gender Identity, and the Implementation of the Right to Access to Health Care in South Africa.', *Health & Human Rights: An International Journal*, 18(2), pp. 195–208.
- Müller, A. et al. (2016) "'You have to make a judgment call". - Morals, judgments and the provision of quality sexual and reproductive health services for adolescents in South Africa', *Social Science and Medicine*, 148, pp. 71–78.
- Müller, A. (2017) 'Scrambling for access: availability, accessibility, acceptability and quality of healthcare for lesbian, gay, bisexual and transgender people in South Africa', *BMC International Health and Human Rights*. BMC International Health and Human Rights, 17(1), p. 16.
- Müller, A. (2018) 'Beyond "invisibility": queer intelligibility and symbolic annihilation in healthcare', *Culture, Health and Sexuality*. Taylor & Francis, 20(1), pp. 14–27.
- Müller, A. and Meer, T. (2018) *Access to justice for South African lesbian, gay, bisexual and transgender survivors of sexual assault*. Cape Town: GHJRU.
- Myer, L. et al. (2008) 'Common Mental Disorders among HIV-Infected Individuals in South Africa: Prevalence, Predictors, and Validation of Brief Psychiatric Rating Scales', *AIDS Patient Care and STDs*, 22(2), pp. 147–158.
- Nadal, K. L., Davidoff, K. C. and Fujii-Doe, W. (2014) 'Transgender Women and the Sex Work Industry: Roots in Systemic, Institutional, and Interpersonal Discrimination', *Journal of Trauma and Dissociation*, 15(2), pp. 169–183.
- Naidoo, S. S. and Schlebusch, L. (2014) 'Sociodemographic characteristics of persons committing suicide in Durban, South Africa: 2006-2007.', *African Journal of Primary Health Care & Family Medicine*, 6(1), pp. E1-7.
- Nath, D. (2011) *'We'll show you you're a woman' - Violence and Discrimination against Black Lesbians and Transgender Men in South Africa*. New York: HRW.
- National Department of Health, (NDoH) et al. (2017) *South Africa Demographic and Health Survey 2016: Key Indicators*. Pretoria, South Africa and Rockville, Maryland, USA. Available at: <https://www.statssa.gov.za/publications/Report03-00-09/Report03-00-092016.pdf>.
- Nel, J. A. and Judge, M. (2008) 'Exploring homophobic victimisation in Gauteng, South Africa: issues, impacts and responses', *Acta Criminologica*, 21(3), pp. 19–36.
- Nemoto, T., Bödeker, B. and Iwamoto, M. (2011) 'Social support, exposure to violence and transphobia, and correlates of depression among male-to-female transgender women with a history of sex work', *American Journal of Public Health*, 101(10), pp. 1980–1988.
- OUT LGBT Well-being (2016) *Hate Crimes against Lesbian, Gay, Bisexual and Transgender (LGBT) people in South Africa*. Pretoria: Hate Crimes Working Group.
- Pega, F. and Veale, J. F. (2015) 'The Case for the World Health Organization's Commission on Social Determinants of Health to Address Gender Identity', *American Journal of Public Health*, 105(3), pp. e58–e62.
- Peltzer, K., Davids, A. and Njuho, P. (2011) 'Alcohol use and problem drinking in South Africa: findings from a national population-based survey.', *African Journal of Psychiatry*, 14(1), pp. 30–7.
- Pillay-van Wyk, V. et al. (2016) 'Mortality trends and differentials in South Africa from 1997 to 2012: second National Burden of Disease Study', *The Lancet Global Health*, 4(9), pp. e642–e653.
- Pinel, E. C. (1999) 'Stigma consciousness: The psychological legacy of social stereotypes.', *Journal of Personality and Social Psychology*, 76(1), pp. 114–128.
- van Pletzen, E. et al. (2012) 'Recall of early non-fatal suicidality in a nationally representative sample of South Africans', *Ethnicity & Health*, 17(1–2), pp. 149–159.
- Plöderl, M. and Tremblay, P. (2015) 'Mental health of sexual minorities. A systematic review' *International Review of Psychiatry*, 27(5), pp. 367–385.
- Radloff, L. S. (1977) 'The CES-D Scale: A self report depression scale for research in the general population', *Applied Psychological Measurement*, 1(3), pp. 385–401.
- Reddy, P. et al. (2015) 'Prevalence of tobacco use among adults in South Africa: Results from the first South African National Health and Nutrition Examination Survey.', *South African Medical Journal = Suid-Afrikaanse tydskrif vir geneeskunde*, 105(8), pp. 648–655.
- Rispel, L. C. et al. (2011) 'You become afraid to tell them that you are gay: health service utilization by men who have sex with men in South African cities.', *Journal of Public Health Policy*, 32 Suppl 1, pp. S137-51.
- Robles, R. et al. (2016) 'Removing transgender identity from the classification of mental

- disorders: a Mexican field study for ICD-11', *The Lancet Psychiatry*, 3(9), pp. 850–859.
- Rosario, M. et al. (2014) 'Sexual-orientation disparities in substance use in emerging adults: a function of stress and attachment paradigms.', *Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors*, 28(3), pp. 790–804.
- Rosser, B. R. S. et al. (2007) 'Capturing the social demographics of hidden sexual minorities: An internet study of the transgender population in the United States', *Sexuality Research and Social Policy*, 4(2), pp. 50–64.
- Sandfort, T., Frazer, M. S., Matebeni, Z., Reddy, V., Southey-Swartz, I., et al. (2015) 'Histories of forced sex and health outcomes among Southern African lesbian and bisexual women: a cross-sectional study.', *BMC Women's Health*, 15, p. 22.
- Sandfort, T. G. M. et al. (2013) 'Forced sexual experiences as risk factor for self-reported HIV infection among southern African lesbian and bisexual women.', *PloS one*, 8(1), p. e53552.
- Sanger, N. and Lynch, I. (2017) "'You have to bow right here": heteronormative scripts and intimate partner violence in women's same-sex relationships', *Culture, Health and Sexuality*, 1058, pp. 1–17.
- Sausa, L. A., Keatley, J. and Operario, D. (2007) 'Perceived risks and benefits of sex work among transgender women of color in San Francisco', *Archives of Sexual Behavior*, 36(6), pp. 768–777.
- Scheim, A. I., Bauer, G. R. and Shokoohi, M. (2016) 'Heavy episodic drinking among transgender persons: Disparities and predictors', *Drug and Alcohol Dependence*, 167, pp. 156–162.
- Schlebusch, L. (2012) 'Suicide prevention: A proposed national strategy for South Africa', *African Journal of Psychiatry*, 15(6), pp. 436–440.
- Smith, R. (2014) 'Healthcare experiences of lesbian and bisexual women in Cape Town, South Africa.', *Culture, Health & Sexuality*, (November), pp. 1–14.
- Spencer, S., Meer, T. and Müller, A. (2017) "'The care is the best you can give at the time": Health care professionals' experiences in providing gender affirming care in South Africa', *PloS One*, pp. 1–18.
- Spitzer, R. L. et al. (2006) 'A Brief Measure for Assessing Generalized Anxiety Disorder', *Archives of Internal Medicine*. American Medical Association, 166(10), p. 1092.
- Statistics South Africa (2017a) *Statistical Release P0318: General Household Survey 2016*. Pretoria. Available at: <http://www.statssa.gov.za/publications/P0318/P03182016.pdf>.
- Statistics South Africa (2017b) *Victims of Crime Survey 2016/17*. Pretoria. Available at: <http://www.statssa.gov.za/publications/P0341/P03412016.pdf>.
- Statistics South Africa, (Stats SA) (2017) *Mortality and causes of death in South Africa, 2015: Findings from death notification*. Pretoria. Available at: <http://www.statssa.gov.za/publications/P03093/P030932015.pdf>.
- Stevens, M. (2012) *Transgender access to sexual health services in South Africa: findings from a key informant survey*. Cape Town: Gender Dynamix.
- Suess Schwend, A. et al. (2018) 'Depathologising gender diversity in childhood in the process of ICD revision and reform', *Global Public Health*, 0(0), pp. 1–14. doi: 10.1080/17441692.2018.1427274.
- Tomlinson, M. et al. (2006) 'Post-partum depression and infant growth in a South African peri-urban settlement', *Child: Care, Health and Development*, 32(1), pp. 81–86.
- Tomlinson, M. et al. (2009) 'The epidemiology of major depression in South Africa: Results from the South African Stress and Health study', *South African Medical Journal*, pp. 367–373.
- Victor, C. J. et al. (2014) 'The Psychological Society of South Africa sexual and gender diversity position statement: contributing towards a just society', *South African Journal of Psychology*, 44, pp. 292–302.
- Walters, M.L., Chen, J. & Breiding, M.J., 2013. The National Intimate Partner and Sexual Violence Survey 2010 Findings on Victimization by Sexual Orientation. Available at: https://www.cdc.gov/violenceprevention/pdf/nisvs_sofindings.pdf.
- Westermeyer, J. (1985) 'Psychiatric diagnosis across cultural boundaries', *Am J Psychiatry*, 142(7), pp. 798–805.
- Winter, S. et al. (2016) 'Transgender people: health at the margins of society', *The Lancet*, 388(10042), pp. 390–400.
- World Health Organization (2018) *WHO ICD-11 Beta Draft*. Available at: <https://icd.who.int/dev11/l-m/en>.
- Young, R. M. and Meyer, I. H. (2005) 'The trouble with "MSM" and "WSW": erasure of the sexual-minority person in public health discourse.', *American Journal of Public Health*, 95(7), pp. 1144–9.
- van Zyl, P. et al. (2015) 'Hazardous, harmful and dependent drinking in hostel-dwelling students at the University of the Free State, Bloemfontein: a cross-sectional study.', *Journal of Child and Adolescent Mental Health*, 27(2), pp. 125–33.

GLOSSARY OF TERMS RELATED TO SEXUAL ORIENTATION, GENDER IDENTITY AND EXPRESSION

Bisexual	People who are emotionally, romantically and/or sexually attracted not exclusively to people of one particular gender; attracted to both men and women.
Cisgender	Denoting or relating to a person whose sense of personal identity and gender corresponds with the sex assigned to them at birth.
Gay	A person who is emotionally, romantically and/or sexually attracted to persons of the same gender.
Gender expression	External appearance of one's gender identity, usually expressed through behaviour, clothing, haircut or voice, and which may or may not conform to socially defined behaviours and characteristics typically associated with being either masculine or feminine.
Gender identity	One's innermost concept of self as man, woman, a blend of both or neither – how individuals perceive themselves and what they call themselves. One's gender identity can be the same or different from their sex assigned at birth.
Gender minority	Gender minority refers to transgender and gender non-conforming/ gender diverse people whose gender identities or gender expressions fall outside of the social norms typically associated with the sex assigned to them at birth.
Gender non-conforming	A broad term referring to people who do not behave in a way that conforms to the traditional expectations of their gender, or whose gender expression does not fit neatly into a category.
Intersex	Intersex is an umbrella term for individuals who are born with sex characteristics that are, according to the typical understanding in society, either female and male at the same time, or not quite female or male, or neither female or male. This diversity can be related to chromosomes, hormones or anatomical features, and is not pathological.
Heterosexual	A person who is emotionally, romantically and/or sexually attracted to persons of the opposite gender.
Lesbian	Term used to describe female-identified people attracted romantically, sexually, and/or emotionally to other female-identified people.
LGBT, LGBTI	An acronym that refers to lesbian, gay, bisexual, transgender (and intersex if the 'I' is included) people. Often used together to refer to a shared marginalisation because of sexual orientation, gender identity and expression (and diversity of sex characteristics).

Sex assigned at birth	The assignment and classification of people as male, female, intersex, or another sex assigned at birth, often based on physical anatomy at birth and/or karyotyping.
Sexual activity	Sexual activity which includes sexual acts and sexual contacts, is the manner in which humans experience and express their sexuality.
Sexual attraction	Sexual attraction is attractiveness on the basis of sexual desire or the quality of arousing that interest. It is inherent to a person, and not a choice.
Sexual identity	Sexual identity is how someone thinks of him/herself in terms of to whom he/she is romantically or sexually attracted.
Sexual minority	A group whose sexual identity, orientation or practices differ from the majority of the surrounding society.
Sexual orientation	An enduring emotional, romantic, sexual or affectional attraction or non-attraction to other people. It is inherent to a person, and not a choice. Sexual orientation is not the same as gender identity.
Transgender	An umbrella term for people whose gender identity and/or expression is different from cultural expectations based on the sex they were assigned at birth. Being transgender does not imply any specific sexual orientation. Therefore, transgender people may identify as straight, gay, lesbian, bisexual, etc.
Transgender man	A person who identifies as a man, but was assigned a female sex at birth.
Transgender woman	A person who identifies as a woman, but was assigned a male sex at birth.

GLOSSARY OF TERMS RELATED TO THE STATISTICAL ANALYSIS

Adjusted Odds Ratio (AOR)	A statistical value that measures how strong an association between two variables might be. Odds ratio is a measure of association between an exposure and an outcome. Adjusted odds ratio is an Odds ratio which is adjusted for potential confounding by other variables.
Community-based sampling	Community-based sampling is a sampling methodology in which the researchers take their study participants (sample) from the community in general.
Confidence interval (CI)	Confidence intervals help us determine what the real value of a statistically calculated value might be. A confidence interval gives an estimated range of values which is likely to include an unknown population parameter, the estimated range being calculated from a given set of sample data.
Demographics	Properties of an individual or sample that can be regarded as factual, often used to structure a research sample. These include for example age, gender, sex, social class, working status and geographic location.
Descriptive statistics	Descriptive statistics are brief descriptive coefficients that summarize a given data set, which can be either a representation of the entire or a sample of a population. Descriptive statistics are broken down into measures of central tendency and measures of variability.
Electronic Data Management System (EDMS)	An Electronic Data Management System (EDMS) is a software package designed to manage electronic information and records within an organization's workflow.
Logistic regression model	Logistic regression is used to obtain odds ratio in the presence of more than one independent variable. It is used to analyse the relationship between two and more variables.
Mean	Mean is the most commonly used measure of central tendency. There are different types of mean inclusive of: arithmetic mean, weighted mean, geometric mean, and harmonic mean. If mentioned without an adjective (as mean), it generally refers to the arithmetic mean, which is computed by adding all the values in the data set divided by the number of observations in it.
Multiple imputation	Multiple imputation is a general approach to the problem of missing data that is available in several commonly used statistical packages. It aims to allow for the uncertainty about the missing data by creating several different plausible imputed data sets and appropriately combining results obtained from each of them.
Online-based sampling	Online-based sampling is a sampling method from a population of individuals when the primary method of gathering the responses to a given survey comprising a set of questions contained in a questionnaire with the purpose of identifying the attitudes of the given population, is over the Internet.

p-value		The p-value or probability value is a statistical test to assess if what we can see in the data is there by chance. The smaller the p value, the less likely it is that what we see in the data is coincidental.
Pilot survey		A pilot survey is conducted with few individuals of the target population or the sample of a survey, in order to test and refine the survey instruments (questionnaire and instruction manual, data processing manual and programmes) before the main data collection starts across the target population or the full sample.
Prevalence		Prevalence refers to the total number of individuals in a population who have a disease or health condition at a specific period of time, usually expressed as a percentage of the population.
Protocol		A (research) protocol is a detailed document that describes the background, rationale, objectives, design, methodology, statistical considerations, and organization of a clinical research project.
Protocol violation		A divergence from the protocol that reduces the quality or completeness of the data, makes the Informed Consent Form inaccurate, or impacts a participant's safety, rights, or welfare.
Sample		In statistics, a sample refers to a set of observations drawn from a population.
Sample size		Sample size is the number of observations in a sample, often denoted with "n". It describes the number of participants who have filled out a survey, and whose answers have been taken into account when analysing the data.
Survey		A survey is an investigation about the characteristics of a given population by means of collecting data from a sample of that population and estimating their characteristics through the systematic use of statistical methodology.
Questionnaire administration		The process of asking questions and recording the answers.
	Self-administration	When the questionnaires are read and filled by the respondents themselves, the questionnaire administration is called self-administration.
	Fieldworker-administration	When a fieldworker read the questions to the participant, the questionnaire administration is called Fieldworker-administration.
Variable		A variable is a characteristic of a unit being observed which may assume more than one of a set of values, to which a numerical measure or a category from a classification can be assigned.
	Binary variable	A binary variable is a variable with only two values.
	Continuous variable	A continuous variable is a variable that has an infinite number of possible values.

APPENDIX 1:

DETAILED METHODOLOGY

Measures: Sexual orientation and gender identity

Survey questions

In order to paint a nuanced picture of the participants' sexual orientation, we aimed to assess self-identified sexual identity, sexual attraction and sexual behaviour. We asked the following questions:

1. **Self-identified sexual identity** was assessed by asking participants "In terms of your sexual orientation, how do you identify?" (Options: Lesbian, Bisexual, Gay, Heterosexual, Asexual, "Other, specify")
2. **Attraction** was assessed by asking participants who they were sexually and emotionally attracted to (2 questions).
3. **Sexual activity** was assessed by asking participants about who they have had "sexual experiences with in the past year and their lifetime" (2 questions).

For attraction and sexual activity, the questionnaire gave participants a list of options from which they could select all that applied (Options: With women, with men, with trans women, with trans men, with gender non-conforming people, with intersex people, "I have not had sexual experiences", "Other, specify").

To measure a participant's gender identity, we combined three questions:

1. **Self-identified gender identity** was assessed by asking "In terms of your gender identity, how do you identify?" (Options: Woman, Man, Trans woman, Trans man, Gender non-conforming, "Other, specify").
2. We asked about **sex assigned at birth** (Options: Male, Female, Intersex)
3. Additionally, we asked what sex/ gender was recorded in the participant's identity document(s)

Categorisation for analysis

Throughout this report, we use categories of sexual orientation (lesbian, gay, bisexual, 'non-normative', and heterosexual) and gender identity (cisgender women, cisgender men, transgender women, transgender men and gender non-conforming people) to disaggregate the findings about experiences of violence and mental health outcomes. To create these categories, we in some instances had to re-code the way participants self-identified, based on the other information they provided in the questions about their sexuality and gender identity. Re-coding in these categories was done in the following ways:

Sexual orientation

- *Lesbian (and other women who have sex with women)*: any participant who identified 'lesbian' as their sexual orientation; any cisgender woman who identified 'gay' as their sexual orientation; any transgender woman who identified as 'gay' and was sexually attracted to/has sex with women; any transgender man who identified as 'gay' and was sexually attracted to/has sex with women¹⁷; any cisgender or transgender woman who identified as 'heterosexual' but exclusively had sex with women in the past year; any cisgender or transgender woman who identified as 'heterosexual,' had not had sex with anyone in the past year and was exclusively sexually attracted to women; gender non-conforming people who identify as gay and have sex exclusively with women.
 - *Gay (and other men who have sex with men)*: Any transgender or cisgender man, gender non-conforming person, or 'other' gender identity who identified their sexual orientation as 'gay'; any transgender woman who identified as 'gay' and was sexually attracted to/has sex with men¹⁸; men who identified their sexual orientation as 'homosexual' or 'MSM'; any cisgender or transgender man who identified as 'heterosexual' but exclusively had sex with men in the past year; any cisgender or transgender man who identified as 'heterosexual,' had not had sex with anyone in the past year and was exclusively sexually attracted to men.
 - *Bisexual*: any participant who identified as 'bisexual'.
 - *Non-normative sexual orientation*: We were cognisant that the more widely used sexual orientations (lesbian, gay, bisexual) depend on the assumption of a gender binary: one can only classify their sexual orientation if one's own gender and one's partner's gender is either woman or man; ie. lesbian means that one identifies as a woman and is attracted to or has sex with other women (Better and Simula, 2015). If one's partner identifies as gender non-conforming, it is not possible to classify one's sexual orientation as lesbian (a woman attracted to women), gay (a man attracted to men) or bisexual (a woman or a man attracted to both men and women). For those participants whose sexual orientation transgressed the gender binary, and for participants who did not fit the gender binary needed to classify their sexual orientation as lesbian, gay or bisexual, we created a new category: that of 'non-normative' sex orientation. The 'non-normative' indicates that they could not be classified as any of the more widely used sexual orientations (lesbian, gay or bisexual). A lot of these participants had listed their sexual orientation as 'other' – including for example, queer or pansexual. Additionally, it includes participants who identified as 'heterosexual' and who reported having sex with people of more than one sex/gender in the past year.
4. *Heterosexual*: any participant who identified as 'heterosexual' and had sex with only people of a different sex/gender in the past year.

17 Transgender men who had sex with women and identified as heterosexual were grouped as 'heterosexual'. While grouping transgender men who identify as gay and who are attracted to and have sex with women as 'lesbian' does not completely accurately capture their self-defined identity, we felt it would have been even less accurate to group them with cisgender men who have sex with men.

18 See previous footnote. Transgender women who had sex with men and identified as heterosexual were grouped as 'heterosexual'. While grouping transgender women who identify as gay and who are attracted to and have sex with men as 'gay' does not completely accurately capture their self-defined identity, we felt it would have been even less accurate to group them with cisgender women who have sex with women.

Gender identity

1. *Transgender women*: Those who self-identified as trans women; those who self-identified as women and were assigned male at birth.
2. *Transgender men*: those who self-identified as trans men; those who self-identified as men and were assigned female at birth.
3. *Gender non-conforming*: those who self-identified as gender non-conforming, regardless of sex assigned at birth.

Measures: Mental health

CES-D 10: Depression

We used the instrument CES-D 10, a 10-item Center for the Epidemiological Studies of Depression Short Form to measure depression. It is widely used to screen for signs of depression in primary care settings, and is often used for research on the prevalence of depression. It is important to keep in mind, however, that we cannot diagnose people using the CES-D 10. In order to receive a definitive diagnosis of clinical depression, an individual needs to see a healthcare provider.

We followed the CES-D 10 instructions to categorise scores into a binary variable, using a cut-off score of 10, where participants with a CES-D 10 score of 10 or above were considered to have signs of depression and those with a score under 10 were classified as not having signs of depression. Additionally, we report only on participants who had no more than two missing values on the CES-D 10 items (Radloff, 1977). However, for logistic regression models including CES-D 10 as a covariate, the continuous variable of the CES-D 10 score was used and multiple imputation was used for missing values. For the logistic regression model where the CES-D 10 score was the outcome, the binary variable was used.

GAD-7: Anxiety

The Generalized Anxiety Disorder 7-item scale (GAD-7) uses seven scored Likert items that assess signs of anxiety in the last two weeks. We created a categorical variable with the following cut-off scores: score of 0 to 4 indicates no anxiety symptoms; score of 5 to 9 indicates mild anxiety symptoms; score of 10 to 14 indicates moderate anxiety symptoms; score of 15 or above indicates severe anxiety symptoms. We also created a binary variable using a score of 10 as a cut-off to compare no/mild anxiety with moderate/severe anxiety, which was used for the logistic regression model where GAD-7 score was the outcome (Kroenke, Spitzer and Williams, 2001; Spitzer *et al.*, 2006). We excluded participants who had missing data for any GAD-7 items from GAD-7 scoring. In logistic regression models in which GAD-7 was a covariate, we used the continuous GAD-7 score, and used multiple imputation to impute missing data.

AUDIT: Alcohol

The Alcohol Use Disorders Identification Test (AUDIT) uses 10 items to assess whether an individual's alcohol use is harmful. The questions ask about how often participants drink alcohol, how much, and how their alcohol use has impacted their life (e.g. "Have you or someone else been injured because of your drinking?"). Participants who do not drink have an AUDIT score

of 0. For those who do drink, we followed the AUDIT manual to create a categorical variable with the following cut-offs: score of 1 to 7 indicates non-hazardous alcohol use; score of 8 to 15 indicates hazardous use; score of 16 to 19 indicates harmful use; score of 20 and above indicates alcohol dependence. We excluded participants who had missing data for any AUDIT items from AUDIT scoring. For the logistic regression model where AUDIT was the outcome, we used a binary variable with a cut-off score of 8 (Barbor *et al.*, 2001). In logistic regression models in which AUDIT was a covariate, we used the continuous AUDIT score. We used multiple imputation to impute missing data for the regression models.

DUDIT: Drugs

The Drug Use Disorders Identification Test (DUDIT) is a scale with 11 items to assess harmful drug use. We created a categorical variable using the following categories, which are suggested by the DUDIT manual: score of 0 for those who do not do drugs; score of 1 to 5 for some drug use; score of 6 to 24 for harmful use; score of 25 and above indicates drug dependence (on one or more drugs) (Berman *et al.*, 2003). To create a binary variable, the DUDIT manual recommends different cut-off scores for men and women, and does not specify what to do in instances of gender minority people. Recognising the limitations of these recommendations for a study with gender diverse participants, we chose to use the higher cut-off score of 6, which the manual recommends for men, for participants of all genders. We used the binary variable with this cut-off point in the logistic regression model where DUDIT was the outcome. In logistic regression models in which DUDIT was a covariate, we used the continuous DUDIT score. We excluded participants who had missing data for any DUDIT items from DUDIT scoring, however we used multiple imputation to impute missing data in the regression models.

Signs of post-traumatic stress

We created a binary variable for signs of post-traumatic stress: those who said they experienced all three signs were categorised as having signs of post-traumatic stress; those who said they experienced one, two, or no signs were categorised as not having signs of post-traumatic stress. This binary variable was used when post-traumatic stress was included as a co-variate in logistic regression models.

Sampling and enrolment

Decisions around sampling for LGBTI populations are complex, and impacted by a number of factors unique to this population and the specific country-context. Sampling is complicated by the following factors, as described by Meyer and Wilson (Meyer and Wilson, 2009):

- LGBTI populations are not easy to identify. Sexual orientation and gender identity are not fixed constructs, different people have different identities, and this is particularly important in contexts where Western concepts of L, G, B, T and I might not hold the same value for everybody. Further, many LGBTI people may not reveal their gender or sexual orientation, or seek assistance from LGBTI organisations, for fear of discrimination.
- LGBTI populations are hidden. For a sampling method that predicts larger, population-size trends, researchers need to know the overall population size, in our example, the overall number of LGBTI individuals in each country. This of course is impossible to determine,

both because of the previous point, and because sexual orientation and gender identity are not registered in national census data, thus making it impossible to obtain this information. This means that sampling methods that will allow us to make predictions about ALL LGBTI people in a certain context are impossible at this moment.

- Given that many partner organisations do not have definite numbers of their constituency population, it would be impossible for us to even make generalising predictions about any organisations’ constituency population, for the same reasons outlined in the previous point (Meyer & Wilson, 2009).

Given these restrictions, we combined two sampling methods: community-based sampling and online-based sampling. We chose to combine these two sampling methods for two reasons:

- Hendricks and Testa (Hendricks and Testa, 2012) show that needs assessments and community-based samples, such as the one we used for our study, often reach especially vulnerable parts of sexual and gender minority populations. This means that the people who participate in community-based surveys, such as ours, are often disadvantaged in more than one way, and so face oppression on more than one level. This means that what we learn from community-based sampled studies can illustrate minority stress by reaching those who are most affected.
- However, Rosser and colleagues (Rosser et al., 2007) have pointed out the limitations of community sampling, which may over-represent targeted problems. In our sample, this means that by sampling people who already access NGOs (arguably because they feel they need support), we might over-estimate the level of mental health problems among sexual and gender minority people more generally. Therefore, we have added online-based sampling to also reach people who do not access NGO services directly.¹⁹

The following table provides an overview of the number of participants in each country, as well as the number of participants enrolled by each organisation.

Partner organisation	Number of participants
Botswana	618
Bonela	223
LeGaBiBo	168
RIA	221
Other (filled out in Kenya but living in Botswana)	3
Ethiopia	198
Organisation 1	64
Organisation 2	119
Other (online)	15

¹⁹ In some countries, the online response rate was poor, or partner organisations chose not to implement online data collection. This was for various reasons, including: poor access to internet, poor access to data collection devices and safety concerns about publicising a public survey link. We describe the country-specific use of the online survey in the Findings section.

Partner organisation	Number of participants
Kenya	976
Ishtar-MSM	183
Jinsiangu	76
Maaygo	181
Minority Women in Action	104
National Gay and Lesbian Human Rights Commission	215
PEMA	216
Other (online)	1
Lesotho	173
People's Matrix Association	173
Malawi	197
Centre for the Development of the People	196
Other (collected in Kenya, participant living in Malawi)	1
South Africa	832
Durban Lesbian and Gay Community and Health Centre	102
Gender Dynamix	166
OUT LGBT Well-Being	202
Triangle Project	256
Other (online)	106
eSwatini	103
Rock of Hope	102
Other (online)	1
Zambia	353
Friends of Rainka	197
TransBantu Zambia	59
The Lotus Identity	90
Other (online)	7

Partner organisation	Number of participants
Zimbabwe	346
Gays and Lesbians of Zimbabwe	178
Sexual Rights Centre	165
Other (online)	3
TOTAL	3,796

Data management

Once the partner organisations had finished collecting data, all questionnaires were sent to the GHJRU's offices at the University of Cape Town for data entry. Data were entered by trained research assistants, using the RedCap online survey tool.

Data quality

We undertook a number of steps to ensure that the quality of data was as high as possible. Questionnaires with good data quality are questionnaires that are completely filled out.

For the online survey: The REDCap online survey had checks for data quality in place. For example, skip/logic patterns were programmed into the survey. The online survey also prompted participants to fill out questions that they had accidentally left out.

For the paper survey: We trained fieldworkers to review all completed paper surveys before the participant who had filled it out left. This was so that the fieldworker could identify questions that the participant might have missed, or questions that the participant should not have answered, or questions where the participant had ticked more than one answer. Because the survey was totally anonymous, we could not go back to participants and ask them about questions they had not filled out, or questions that they had filled out incorrectly (where, for example, they had ticked two possible answers and we did not know which one was correct).

Once received at the GHJRU offices, we (the researchers) checked all surveys checked for quality. We trained people to enter the data, who would also identify unusual responses or errors in the data documented on the surveys. When necessary, we held meetings with the data enterer to decide on "data entry rules" for surveys where participants had ticked contradictory answers. We applied these data entry rules to all surveys.

In cases where the participants had not ticked yes to all eligibility questions, or where they had not ticked yes to say that they consented to participating, we did not enter the data from the survey and excluded the participant from the study.

Data cleaning

We used REDCap was used during the data cleaning process to update data in instances of data entry error. Following this, data was exported to Stata. We used Stata to examine patterns of missing and conflicting data. Unusual or unexpected responses that were identified in this process were checked against paper copies and amended as needed.

“Other, specify” responses were reviewed by the research team. We recorded decisions on how to code these write-in responses in the “data entry rules,” which were applied to data from all countries. In instances of large numbers of the same “other” responses, we created new coding categories.

Conflicting data

In some instances, questions asked about the same experience twice: first about the experience in participants’ lifetime, then in the last 12 months. For example:

	Has there ever been a period of time when you thought about committing suicide?	In your lifetime?	1 Yes	0 No
		In the last 12 months?	1 Yes	0 No

In some instances, participants entered a conflicting response; for example, saying that they had not thought about suicide in their lifetime, but had thought about it in the last 12 months. In some instances, they left the question about lifetime incomplete, but said they had thought about suicide in the last 12 months. During data cleaning, we made the decision to recode “lifetime” as “yes” in both these instances – so if a participant said they had experienced something in the past 12 months, by default they had also experienced it in their lifetime. This was done for all questions in the above format in the questionnaire.

Data analysis

All data from the online survey and paper survey were managed through REDCap at the University of Cape Town. Data cleaning was completed with REDCap and Stata15. Data analysis was conducted with Stata15.

Describing the data

The main aim of this research was to report prevalence of mental health concerns, healthcare access experiences, experiences of violence, social support and stigma among sexual and gender minority people in our sample.

For this reason, the majority of the report uses descriptive statistics to explain what the research participants reported. These findings should not be considered “representative” of the sexual and gender minority population in each country. However, as an exploratory, cross-sectional study we hope that our findings will reveal priority areas for future research and service delivery, considering the dearth of evidence on sexual and gender minority people’s mental health and wellness on the continent.

Measuring associations

This study did not collect information from heterosexual, cisgender people. Because of this, our findings do not report on sexual and gender minority people as compared to their heterosexual, cisgender counterparts. In some instances we drew on peer-reviewed and grey literature in order to discuss our findings as compared to other populations.

In some instances, we report on interesting associations we found within our own sample. For example, we often examined differences between gender minorities and cisgender participants (where the cisgender participants are sexual minority people) and between black and white participants (where black refers to any participant who did not identify as white). For these comparisons, we started with using chi squared (or Fisher's exact) tests to assess raw associations between categories. The p-values for these tests are reported in tables throughout the Findings section of this report. P-values describe the statistical significance of the association, that is, the chances of whether the association we found is simply due to chance.

Logistic regression

In some instances, we used a tool called logistic regression to examine differences in outcomes within our sample. For example, in countries with large sample sizes, we used logistic regression to assess if there was a difference in depression level ('outcome') between cisgender and gender minority participants ('predictor') while also accounting for other factors.

Logistic regression is used when an outcome has multiple predictors (factors that may cause, prevent or contribute to the outcome). By using logistic regression, we are able to measure association between the outcome and multiple predictors at the same time. Logistic regression produces adjusted odds ratios (AORs), which measures the size of association between different predictors and the outcome.

In our logistic regression models, we included predictors that are known or suspected confounders ("third variables" that influence both a predictor and an outcome) or that are believed to otherwise influence the outcome. This inclusion is called 'adjustment', meaning that the AOR takes into account the effects of other predictors when describing the relationship between any one predictor and outcome.

Examining the AOR gives information about how predictors and outcomes were related in our sample. AORs greater than 1 mean that as the predictor increases, the odds of the outcome increases ("positively associated") and AORs less than 1 mean that as the predictor increases, the odds of the outcome decreases ("negatively associated").

P-values and confidence intervals add understanding about whether these findings are due to chance. A p-value is a measure related to probability. The confidence interval expresses a range in which we are "confident" that the true AOR exists. For this study, we used 95% confidence intervals for AORs—meaning that we are 95% confident that the 'true' association between the predictor and outcome lies within the confidence interval. A p-value of less than 0.05 indicates that there is a 'true' difference in the outcome as a predictor changes (while also accounting for the other predictors in the model).

Example

For example, in South Africa, we found that lifetime experience of sexual violence was associated with suicidal ideation in the last year (see in the South Africa section of this report):

Suicidal ideation (last year)	AOR	95% CI	p
No experience of sexual violence	-	Reference category	
Experienced sexual violence (lifetime)	2.05	1.29 – 3.26	0.003

We can interpret this table as follows:

- Reference category is “no experience of sexual violence” – this means that the predictor is “experienced sexual violence (lifetime)”, which will be compared to “no experience of sexual violence” (the reference category)
- AOR of 2.05 – The odds of suicidal ideation in the last year are 2.05 greater in those who experienced lifetime sexual violence, in comparison to those who did not experience sexual violence, holding all other factors constant.
- 95% confidence interval of 1.29-3.26 – We are 95% confident that the AOR is between 1.29 and 3.26.
- p-value of 0.003 – The p-value is less than 0.05 (<0.05) which means we believe that there is a statistically significant difference in the AOR of suicidal ideation in the last year between those who have and have not experienced sexual violence in their lifetimes.

Missing data

Prior to beginning analysis, we examined patterns of missing data. Missing data was sometimes more common for specific variables than others.

Due to the anonymous nature of the questionnaire, we could not follow-up with participants to ask their response when a questionnaire item was incomplete. We recorded these in the database as missing data.

Missing data was more common in the “outcomes” section of the questionnaire, which came after demographics, and among those who completed the questionnaire online. We expect that some participants chose to end the survey early or were otherwise interrupted while completing the online survey. In analysis, we included only questionnaires (paper and online) in which the participant completed at least some items in the “outcomes” section.

Patterns of missing data were different between study countries, study sites, and between questionnaire items. After consideration, we decided to report descriptive statistics using only complete data (please note the sample sizes in the “Findings” of this report by locating the “n” for each table or figure). This is known as “complete case analysis.”

For some measures of association, we utilised a method for dealing with missing data called multiple imputation. Multiple imputation is a statistical process with three steps: (1) imputation—statistical software is used to generate duplicate datasets in which the missing data has been replaced by calculated values (“imputations”), (2) analysis—each imputed data set is analysed separately, (3) pooling—the separate analyses are statistically pooled into one measure of association.

Multiple imputation is useful because it can help prevent bias that missing data can cause.

We decided not to apply multiple imputation while reporting on descriptive statistics, although this has been done by others elsewhere. Based on the designed purpose of multiple imputation, imputed data is not meant to truly replace or substitute the answer that would have been true for a participant. Rather, imputed data is used more like a place holder so that a statistical analysis can be stronger. For this reason, we felt that reporting imputed data in descriptive statistics would be misleading.

We used multiple imputation to account for missing data in all regression models. To multiply impute, we used predictive mean matching for continuous variables and categorical scale items (i.e. Likert scales) and logistic regression for binary variables. Predictive mean matching was a method designed for continuous data, but it has been suggested it can also be applied to categorical variables (Morris, White and Royston, 2014). We imputed only variables that were necessary for these analyses, as well as additional variables we felt might be associated with “missingness” of data. All variables relevant to the analyses were imputed, even when the amount of missing data was small.

APPENDIX 2: QUESTIONNAIRE

SOUTH AFRICA—ENGLISH

Instructions for self-administration

You will complete this questionnaire by yourself. A fieldworker will review what the study is about and check that you are eligible and willing to be in the study.

Carefully complete this questionnaire. Check that you have completed every question.

For most questions, choose one response.

106.	Do you own your housing? PLEASE TICK ONE	<input type="radio"/> 1 Yes, I own it myself <input type="radio"/> 2 No, I rent it <input checked="" type="radio"/> 3 No, I share housing and do not pay for it <input type="radio"/> 4 Not applicable (living on the street)			
208.	When seeking healthcare, how often do you think you have been treated disrespectfully by staff for being LGBTI? (this includes doctors, nurses, counsellors, other people working at public, private, or traditional healthcare facilities)	<input checked="" type="radio"/> 1 Never	<input type="radio"/> 2 Rarely	<input type="radio"/> 3 Sometimes	<input type="radio"/> 4 Often
209.	When seeking healthcare, how often do you think have you received poorer service than other people for being LGBTI?	<input type="radio"/> 1 Never	<input checked="" type="radio"/> 2 Rarely	<input type="radio"/> 3 Sometimes	<input type="radio"/> 4 Often

Some items allow you to tick more than one response.

112.	Who do you feel sexually attracted to? PLEASE TICK <u>ALL</u> THAT APPLY	<input checked="" type="checkbox"/> 1 To women <input type="checkbox"/> 2 To men <input type="checkbox"/> 3 To trans women <input checked="" type="checkbox"/> 4 To trans men <input type="checkbox"/> 5 To gender non-conforming people <input checked="" type="checkbox"/> 6 To intersex people <input type="checkbox"/> 7 I do not feel sexual attraction <input type="checkbox"/> 8 Other, specify: _____				
------	---	--	--	--	--	--

Sometimes the same question is asked twice—once about the last 12 months and once about your whole lifetime (ever).

403.	Has anyone ever <u>insulted or verbally harassed</u> you because of being LGBTI?	a. In your life time?	<input checked="" type="radio"/> 1 Yes	<input type="radio"/> 2 No
		b. In the last 12 months?	<input type="radio"/> 1 Yes	<input checked="" type="radio"/> 2 No

Be sure to answer both questions. Remember that if you experienced something in the last 12 months, you have also experienced it in your lifetime.

If you make a mistake, make the correction clearly. Place one or two lines through the incorrect response and circle the correct response.

214.	Have you postponed or not tried to get needed healthcare <u>when you were sick or injured</u> because you could not afford it?	<input checked="" type="radio"/> 1 Yes	<input type="radio"/> 2 No
215.	Have you postponed or not tried to get LGBTI-related healthcare because you could not afford it?	<input checked="" type="radio"/> 1 Yes	<input type="radio"/> 2 No

SOUTH AFRICA—ENGLISH

Questionnaire consent statement

The Gender Health and Justice Research Unit at the University of Cape Town, in partnership with COC Netherlands and community based organisations across 12 African countries, (Angola, Botswana, Kenya, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe) is surveying people who are/identify as LGBTI. We aim to develop a better understanding of mental health, wellbeing, and experiences of discrimination, in order to inform advocacy efforts for improved services.

For this survey, we use LGBTI to mean someone who is or identifies as *any* of the following: gay, lesbian, bisexual, pansexual, omnisexual, asexual, men who have sex with men (MSM), women who have sex with women (WSW), transgender, transsexual, transman, transwoman, non-binary trans, queer, genderqueer, gender diverse, gender non-conforming, intersex and body diverse.

Please fill out our quick survey to let us know about your experiences accessing healthcare, about your mental health and well-being, and your experiences with violence.

This survey should take about 20-30 minutes to complete. This survey is **anonymous**, meaning that we will not ask for your name or any other identifying information. What you share in this survey will be kept confidential.

At the end of this survey, we will include a list of resources in your country should you need someone to talk to about your mental health, wellbeing, or experiences of discrimination.

The outcomes of the survey will be used to inform agenda setting by the COC Netherlands and in-country partner organisations to plan advocacy efforts around improving access to services for LGBTI people, particularly mental health services. The findings of this study may be published in academic literature, in which case your answers will not be linked to any identifying information. We can email you a report with the outcomes of this survey. If you wish to receive this report, please contact the organisation that gave you this questionnaire or sent you the link.

Please do not hesitate to contact us if you have any questions. If you have questions about your rights as a research participant, please contact the Faculty of Health Sciences Human Research Ethics Committee, Room E52-54 Groote Schuur Hospital Old Main Building, Observatory 7925, phone +27 21 406 6338 or email shuretta.thomas@uct.ac.za.

To begin, please complete the eligibility questions below.

Thank you for your assistance.

Kind regards

Dr Alex Muller
Senior Researcher
Gender Health and Justice Research Unit
University of Cape Town
Falmouth Building, Entrance 1, Level 1, Room 1.01.5
(021) 406 6021
alexandra.muller@uct.ac.za

These questions should be completed by a fieldworker:

1. Are you 18 years of age or older?

- Yes
- No → NOT ELIGIBLE

2. Do you identify as LGBTI (see above)?

- 1 Yes
- 0 No → NOT ELIGIBLE

3. Do you currently live in Angola, Botswana, Kenya, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, or Zimbabwe?

- 1 Yes
- 0 No → NOT ELIGIBLE

This question should be *ticked by the participant*, but can be asked by a fieldworker:

4. Do you agree to participate in this survey, based on the information outlined above? (this will be regarded as your informed consent to participate in this survey)

- 1 Yes
- 0 No → NOT ELIGIBLE

5. Are you completing the questionnaire by yourself?

- 1 Yes (self-administered)
- 0 No (fieldworker administered)

The following question should be completed by the fieldworker.

6. Has the participant answered yes to questions 1, 2, 3 and 4?

- 0 No → Sign and STOP HERE. Explain to participant they are not eligible for the survey. Place this completed form in a secure place.
- 1 Yes → Sign and continue data collection per guidelines in the Fieldworker Manual.

Fieldworker signature: _____ Date: _____

SOUTH AFRICA—ENGLISH

Section 1a: Background

101.	How old are you?	PLEASE WRITE YOUR AGE: _____
102.	In which country do you currently live? PLEASE TICK ONE	<input type="radio"/> 1 Angola <input type="radio"/> 2 Botswana <input type="radio"/> 3 Kenya <input type="radio"/> 4 Lesotho <input type="radio"/> 5 Malawi <input type="radio"/> 6 Mozambique <input type="radio"/> 7 Namibia <input type="radio"/> 8 South Africa <input type="radio"/> 9 Swaziland <input type="radio"/> 10 Tanzania <input type="radio"/> 11 Zambia <input type="radio"/> 12 Zimbabwe
103.	How did you hear about this study?	<input type="radio"/> 14 Durban Gay and Lesbian Centre <input type="radio"/> 15 Triangle Project <input type="radio"/> 16 OUT <input type="radio"/> 17 Gender DynamiX
104.	How do you identify your race?	<input type="radio"/> 1 Black <input type="radio"/> 2 White <input type="radio"/> 3 Indian <input type="radio"/> 4 Coloured <input type="radio"/> 5 Other specify: _____
105.	In what type of housing do you currently live?	<input type="radio"/> 1 House <input type="radio"/> 2 Apartment / flat / garden cottage <input type="radio"/> 3 Shanty / Shack <input type="radio"/> 4 Hotel <input type="radio"/> 5 Mobile house <input type="radio"/> 6 On the street

SOUTH AFRICA—ENGLISH

106.	Do you own your housing? PLEASE TICK ONE	<input type="radio"/> 1 Yes, I own it myself <input type="radio"/> 2 No, I rent it <input type="radio"/> 3 No, I share housing and do not pay for it <input type="radio"/> 77 Not applicable (living on the street)
107.	What type of area do you live in?	<input type="radio"/> 1 Urban <input type="radio"/> 2 Semi-urban/Peri-urban <input type="radio"/> 3 Rural
108.	On average, do you have enough money to cover your basic needs?	<input type="radio"/> 1 Yes <input type="radio"/> 0 No
109.	Do you have a job for which you are paid?	<input type="radio"/> 1 Yes, I have formal employment (I have an employment contract) <input type="radio"/> 2 Yes, I have informal employment (I am paid for work but do not have an employment contract) <input type="radio"/> 0 No, I do not have any work for which I am paid
110.	Which religion, if any, most closely aligns to your beliefs?	<input type="radio"/> 1 African tradition <input type="radio"/> 2 Islam <input type="radio"/> 3 Christianity <input type="radio"/> 4 Rastafarianism <input type="radio"/> 5 Judaism <input type="radio"/> 6 I am not religious <input type="radio"/> 7 Other, specify: _____
111.	What is the highest level of education that you have completed?	<input type="radio"/> 1 No formal education <input type="radio"/> 2 Primary education <input type="radio"/> 3 Secondary school (matric) <input type="radio"/> 4 Post-secondary school/University diploma or degree

SOUTH AFRICA—ENGLISH

112.	Who do you feel sexually attracted to? PLEASE TICK <u>ALL</u> THAT APPLY	<input type="checkbox"/> 1 To women <input type="checkbox"/> 2 To men <input type="checkbox"/> 3 To trans women <input type="checkbox"/> 4 To trans men <input type="checkbox"/> 5 To gender non-conforming people <input type="checkbox"/> 6 To intersex people <input type="checkbox"/> 7 I do not feel sexual attraction <input type="checkbox"/> 8 Other, specify: _____
113.	Who do you feel emotionally attracted to? PLEASE TICK <u>ALL</u> THAT APPLY	<input type="checkbox"/> 1 To women <input type="checkbox"/> 2 To men <input type="checkbox"/> 3 To trans women <input type="checkbox"/> 4 To trans men <input type="checkbox"/> 5 To gender non-conforming people <input type="checkbox"/> 6 To intersex people <input type="checkbox"/> 7 I do not feel emotional attraction <input type="checkbox"/> 8 Other, specify: _____
114.	In the last year, whom have you had sexual experiences with? PLEASE TICK <u>ALL</u> THAT APPLY	<input type="checkbox"/> 1 With women <input type="checkbox"/> 2 With men <input type="checkbox"/> 3 With trans women <input type="checkbox"/> 4 With trans men <input type="checkbox"/> 5 With gender non-conforming people <input type="checkbox"/> 6 With intersex people <input type="checkbox"/> 7 I have not had sexual experiences in the last year <input type="checkbox"/> 8 Other, specify: _____
115.	In your lifetime, whom have you had sexual experiences with? PLEASE TICK <u>ALL</u> THAT APPLY	<input type="checkbox"/> 1 With women <input type="checkbox"/> 2 With men <input type="checkbox"/> 3 With trans women <input type="checkbox"/> 4 With trans men <input type="checkbox"/> 5 With gender non-conforming people <input type="checkbox"/> 6 With intersex people <input type="checkbox"/> 7 I have never had sexual experiences <input type="checkbox"/> 8 Other, specify: _____

SOUTH AFRICA—ENGLISH

116.	In terms of your sexual orientation, how do you identify? PLEASE TICK ONE	<input type="radio"/> 1 Lesbian <input type="radio"/> 2 Bisexual <input type="radio"/> 3 Gay <input type="radio"/> 4 Heterosexual <input type="radio"/> 5 Asexual <input type="radio"/> 6 Other; please specify _____
117.	In terms of your gender identity, how do you identify? PLEASE TICK ONE	<input type="radio"/> 1 Woman <input type="radio"/> 2 Man <input type="radio"/> 3 Trans woman <input type="radio"/> 4 Trans man <input type="radio"/> 5 Gender non-conforming <input type="radio"/> 6 Other; please specify: _____
118.	How was your sex classified at birth? PLEASE TICK ONE	<input type="radio"/> 1 Female <input type="radio"/> 2 Male <input type="radio"/> 3 Intersex (persons born with sex organs/genitals that do not appear typically female or typically male)
119.	What is the legal sex/gender currently recorded in your identity document? PLEASE TICK ONE	<input type="radio"/> 1 Female <input type="radio"/> 2 Male <input type="radio"/> 3 Intersex <input type="radio"/> 4 Unspecified <input type="radio"/> 5 Other; please specify: _____ <input type="radio"/> 77 I do not have an identity document

SOUTH AFRICA—ENGLISH

Section 1b: Gender expression

We would now like to know more about your gender expression. Indicate on a scale from 1 (not at all) to 5 (extremely) how masculine and feminine you think you are. We understand that being masculine or feminine is not natural or something you are born with, but we would like to know about how much you conform to society's expectations of what is masculine or feminine.

Place an X in one box that best describes your answer to each question.

120.	In general, how feminine do you think you are?	₁ Not at all	₂ A little	₃ Somewhat	₄ Very much	₅ Extremely
121.	In general, how feminine do you behave in front of others?	₁ Not at all	₂ A little	₃ Somewhat	₄ Very much	₅ Extremely
122.	In general, how feminine do you appear to others?	₁ Not at all	₂ A little	₃ Somewhat	₄ Very much	₅ Extremely
123.	In general, how masculine do you think you are?	₁ Not at all	₂ A little	₃ Somewhat	₄ Very much	₅ Extremely
124.	In general, how masculine do you behave in front of others?	₁ Not at all	₂ A little	₃ Somewhat	₄ Very much	₅ Extremely
125.	In general, how masculine do you appear to others?	₁ Not at all	₂ A little	₃ Somewhat	₄ Very much	₅ Extremely
The following questions are about your use of some different gender-affirming practices. We understand that not everyone does these practices; however, we appreciate any information you are able to share with us, whether you do these practices or not.						
139.	Do you use hormones for gender affirming care ("transitioning")?	₁ Yes, from a local private healthcare provider	₂ Yes, from a local public healthcare provider	₃ Yes, from another source	₀ No	
140.	Do you use any method of binding (binders, bandages, etc.)?				₁ Yes	₀ No
141.	Do you tuck (or use any method of hiding your penis)?				₁ Yes	₀ No

Section 1d: Gender identity and self

Complete this section if you identify as transgender, genderqueer, and/or gender non-conforming. If you do not identify as transgender, genderqueer, and/or gender non-conforming, go to the next page.

Place an X in one box that best describes your answer to each question.

Please answer these questions based on YOUR OWN feelings about yourself.

132.	Sometimes I dislike myself for being transgender, genderqueer, and/or gender non-conforming.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly
133.	Sometimes I wish I wasn't transgender, genderqueer, and/or gender non-conforming.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly
134.	I think about the fact that I am transgender, genderqueer, and/or gender non-conforming when I interact with people.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly
135.	I feel that being transgender, genderqueer, and/or gender non-conforming is a personal weakness of mine.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly
136.	If someone offered me the chance to be cisgender, I would accept the offer.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly

The following questions are about your access to gender-affirming treatments. We understand that not everyone chooses to use these treatments; however, we appreciate any information you are able to share with us about access, whether you use these treatments or not.

137.	Can you get hormones for transitioning from a local healthcare provider, if you need them?	1 Yes	0 No
138.	Can you get gender affirming surgery from a local healthcare provider, if you need it?	1 Yes	0 No

SOUTH AFRICA—ENGLISH

Section 1c: Sexuality and self

Complete this section if you do not identify as heterosexual or asexual. If you do identify as heterosexual or asexual, go to the next page.

Place an X in one box that best describes your answer to each question.

Please answer these questions based on YOUR OWN feelings about yourself.

126.	Sometimes I dislike myself for being a person who has (or wants) sex with people of the same sex.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly
127.	I wish I was only sexually attracted to the opposite sex.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly
128.	I am ashamed of myself for being sexually attracted to people of the same sex.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly
129.	I feel that being attracted to people of the same sex is a personal weakness of mine.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly
130.	If someone offered me the chance to be completely heterosexual, I would accept the offer.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly
131.	Whenever I think about having sex with someone of the same sex, I feel bad about myself.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly

Section 1e: Being intersex and self

Complete this section if you are intersex. If you are not intersex, go to the next page.

Place an X in one box that best describes your answer to each question.

Please answer these questions based on YOUR OWN feelings about yourself.

142.	Sometimes I dislike myself for being intersex.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly	
143.	Sometimes I wish I wasn't intersex.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly	
144.	I think about the fact that I am intersex when I interact with people.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly	
145.	I feel that being intersex is a personal weakness of mine.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly	
146.	If someone offered me the chance to not have been born intersex, I would accept the offer.	1 Disagree strongly	2 Disagree	3 Agree	4 Agree strongly	
147.	How do you rate your healthcare providers' knowledge and skills on intersex healthcare?	4 Very good	3 Good	2 Poor	1 Very poor	
148.	Has healthcare staff ever put your body on display for others to look at?				1 Yes	0 No

SOUTH AFRICA—ENGLISH

Section 2a: Health service use

The following questions will ask about your health service use at community-based organisations/non-governmental organisations, public services, private services, and indigenous or traditional healers or providers.

201.	Do you have private medical aid or health insurance?	1 Yes	0 No
202.	<p>For which health services have you accessed community-based organisation or non-governmental organisation healthcare in the last 12 months?</p> <p>TICK ALL THAT APPLY</p> <p><i>(If you do not use community-based organisation or non-governmental organisation healthcare, tick "None" at the bottom)</i></p>	<input type="checkbox"/> 1 Regular check-ups when I am feeling well <input type="checkbox"/> 2 Check-ups when I am feeling sick <input type="checkbox"/> 3 Emergency care <input type="checkbox"/> 4 Care after a sexual assault <input type="checkbox"/> 5 Care after a physical assault <input type="checkbox"/> 6 Testing for HIV <input type="checkbox"/> 7 HIV care and treatment <input type="checkbox"/> 8 Testing, care, or treatment for other sexually transmitted infections (STIs) (not HIV) <input type="checkbox"/> 15 Counselling or psychosocial support <input type="checkbox"/> 16 Care for mental health conditions <input type="checkbox"/> 10 Barrier methods (condoms, dental dams or finger condoms) <input type="checkbox"/> 11 Contraception (injection, pill, IUD/loop, implant) <input type="checkbox"/> 12 Gender affirming treatment (hormones, surgery) <input type="checkbox"/> 13 Other, specify: _____ <input type="checkbox"/> 14 None	
203.	<p>For which health services have you accessed public health care (clinic/hospital) in the last 12 months?</p> <p>TICK ALL THAT APPLY</p> <p><i>(If you do not use public healthcare, tick "None" at the bottom)</i></p>	<input type="checkbox"/> 1 Regular check-ups when I am feeling well <input type="checkbox"/> 2 Check-ups when I am feeling sick <input type="checkbox"/> 3 Emergency care <input type="checkbox"/> 4 Care after a sexual assault <input type="checkbox"/> 5 Care after a physical assault <input type="checkbox"/> 6 Testing for HIV <input type="checkbox"/> 7 HIV care and treatment <input type="checkbox"/> 8 Testing, care, or treatment for other sexually transmitted infections (STIs) (not HIV) <input type="checkbox"/> 15 Counselling or psychosocial support <input type="checkbox"/> 16 Care for mental health conditions <input type="checkbox"/> 10 Barrier methods (condoms, dental dams or finger condoms) <input type="checkbox"/> 11 Contraception (injection, pill, IUD/loop, implant) <input type="checkbox"/> 12 Gender affirming treatment (hormones, surgery) <input type="checkbox"/> 13 Other, specify: _____ <input type="checkbox"/> 14 None	

<p>204.</p>	<p>For which health services have you accessed private health care (clinic/hospital) in the last 12 months?</p> <p>TICK ALL THAT APPLY</p> <p><i>(If you do not use private healthcare, tick "None" at the bottom)</i></p>	<p><input type="checkbox"/> 1 Regular check-ups when I am feeling well</p> <p><input type="checkbox"/> 2 Check-ups when I am feeling sick</p> <p><input type="checkbox"/> 3 Emergency care</p> <p><input type="checkbox"/> 4 Care after a sexual assault</p> <p><input type="checkbox"/> 5 Care after a physical assault</p> <p><input type="checkbox"/> 6 Testing for HIV</p> <p><input type="checkbox"/> 7 HIV care and treatment</p> <p><input type="checkbox"/> 8 Testing, care, or treatment for other sexually transmitted infections (STIs) (not HIV)</p> <p><input type="checkbox"/> 15 Counselling or psychosocial support</p> <p><input type="checkbox"/> 16 Care for mental health conditions</p> <p><input type="checkbox"/> 10 Barrier methods (condoms, dental dams or finger condoms)</p> <p><input type="checkbox"/> 11 Contraception (injection, pill, IUD/loop, implant)</p> <p><input type="checkbox"/> 12 Gender affirming treatment (hormones, surgery)</p> <p><input type="checkbox"/> 13 Other, specify: _____</p> <p><input type="checkbox"/> 14 None</p>
<p>205.</p>	<p>For which health services have you accessed indigenous or traditional healthcare or faith healing in the last 12 months?</p> <p>TICK ALL THAT APPLY</p> <p><i>(If you do not use indigenous or traditional healthcare or faith healing, tick "None" at the bottom)</i></p>	<p><input type="checkbox"/> 1 Regular check-ups when I am feeling well</p> <p><input type="checkbox"/> 2 Check-ups when I am feeling sick</p> <p><input type="checkbox"/> 3 Emergency care</p> <p><input type="checkbox"/> 4 Care after a sexual assault</p> <p><input type="checkbox"/> 5 Care after a physical assault</p> <p><input type="checkbox"/> 6 Testing for HIV</p> <p><input type="checkbox"/> 7 HIV care and treatment</p> <p><input type="checkbox"/> 8 Testing, care, or treatment for other sexually transmitted infections (STIs) (not HIV)</p> <p><input type="checkbox"/> 15 Counselling or psychosocial support</p> <p><input type="checkbox"/> 16 Care for mental health conditions</p> <p><input type="checkbox"/> 10 Barrier methods (condoms, dental dams or finger condoms)</p> <p><input type="checkbox"/> 11 Contraception (injection, pill, IUD/loop, implant)</p> <p><input type="checkbox"/> 12 Gender affirming treatment (hormones, surgery)</p> <p><input type="checkbox"/> 13 Other, specify: _____</p> <p><input type="checkbox"/> 14 None</p>

SOUTH AFRICA—ENGLISH

Section 2b: Health service barriers

Place an X in one box that best describes your answer to each question.

206.	Have you ever disclosed being LGBTI to a healthcare staff member? (this includes doctors, nurses, counsellors, other people working at public, private, or traditional healthcare facilities)			₁ Yes	₀ No
207.	Has a healthcare staff member ever made assumptions about your sexual orientation and/or gender identity? (for example, assumed you are LGBTI based on how you dress)			₁ Yes	₀ No
208.	When seeking healthcare, how often do you think you have been treated disrespectfully by staff for being LGBTI? (this includes doctors, nurses, counsellors, other people working at public, private, or traditional healthcare facilities)	₁ Never	₂ Rarely	₃ Sometimes	₄ Often
209.	When seeking healthcare, how often do you think have you received poorer service than other people for being LGBTI?	₁ Never	₂ Rarely	₃ Sometimes	₄ Often
210.	How often have you been called names or insulted by healthcare staff for being LGBTI? (this includes doctors, nurses, counsellors, other people working at public, private, or traditional healthcare facilities)	₁ Never	₂ Rarely	₃ Sometimes	₄ Often
211.	How often do you think healthcare staff has denied you a service because of being LGBTI? (this includes doctors, nurses, counsellors, other people working at public, private, or traditional healthcare facilities)	₁ Never	₂ Rarely	₃ Sometimes	₄ Often
212.	How often has healthcare staff threatened to call the police because you were LGBTI? (this includes doctors, nurses, counsellors, other people working at public, private, or traditional healthcare facilities)	₁ Never	₂ Rarely	₃ Sometimes	₄ Often
213.	Have you ever not told a healthcare staff member about a health need you have which is related to the fact that you are LGBTI? (for example, anal warts, sexual health advice for lesbian couples, gender-affirming treatment)			₁ Yes	₀ No

Section 2c: Impact of previous experiences on health-seeking behaviour

Place an X in one box that best describes your answer to each question.

214.	Have you postponed or not tried to get needed healthcare <u>when you were sick or injured</u> because you could not afford it?			₁ Yes	₀ No
215.	Have you postponed or not tried to get <u>HIV testing</u> because you could not afford it?			₁ Yes	₀ No
216.	Have you postponed or not tried to get <u>STI testing or STI/HIV treatment</u> because you could not afford it?			₁ Yes	₀ No
217.	Have you postponed or not tried to get needed healthcare <u>when you were sick or injured</u> because of disrespect or discrimination based on being LGBTI from doctors or other healthcare providers?			₁ Yes	₀ No
218.	Have you postponed or not tried to get <u>HIV testing</u> because of disrespect or discrimination based on being LGBTI from doctors or other healthcare providers?			₁ Yes	₀ No
219.	Have you postponed or not tried to get <u>STI testing or STI/HIV treatment</u> because of disrespect or discrimination based on being LGBTI from doctors or other healthcare providers?			₁ Yes	₀ No
220.	Have you ever hidden, or tried to hide, that you are LGBTI from a healthcare provider for fear of discrimination?			₁ Yes	₀ No
221.	Are you aware of a healthcare professional ever sharing that you are LGBTI with others without your permission?			₁ Yes	₀ No

Section 3: Tobacco

3001.	Do you currently smoke tobacco every day, some days, or not at all?	² Every day (Go to 3004)	¹ Some days (Go to 3002)	⁰ Not at all (Go to 3003)
3002.	Have you smoked tobacco every day in the past?		¹ Yes (Go to 3004)	⁰ No (Go to 3004)
3003.	In the past, have you ever smoked tobacco?	² Yes, every day in the past (Go to next section)	¹ Yes, some days in the past (Go to next section)	⁰ No (Go to next section)
3004.	On average, how many cigarettes do you currently smoke each day when you smoke?	Write the number per day: _____ Note: 1 pack = 20 cigarettes		

Section 3a: Alcohol

Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest.

Place an X in one box that best describes your answer to each question.

301.	How often do you have a drink containing alcohol?	⁰ Never (Go to next section)	¹ Monthly or less	⁽²⁾ 2-4 times a month	⁽³⁾ 2-3 times a week	⁽⁴⁾ 4 or more times a week
302.	How many drinks containing alcohol do you have on a typical day when you are drinking?	⁽⁰⁾ 1 or 2	⁽¹⁾ 3 or 4	⁽²⁾ 5 or 6	⁽³⁾ 7, 8 or 9	⁽⁴⁾ 10 or more
303.	How often do you have six or more drinks on one occasion?	⁰ Never	¹ Less than monthly	² Monthly	³ Weekly	⁴ Daily or almost daily
304.	How often during the last year have you found that you were not able to stop drinking once you had started?	⁰ Never	¹ Less than monthly	² Monthly	³ Weekly	⁴ Daily or almost daily
305.	How often during the last year have you failed to do what was normally expected of you because of drinking?	⁰ Never	¹ Less than monthly	² Monthly	³ Weekly	⁴ Daily or almost daily
306.	How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	⁰ Never	¹ Less than monthly	² Monthly	³ Weekly	⁴ Daily or almost daily
307.	How often during the last year have you had a feeling of guilt or remorse after drinking?	⁰ Never	¹ Less than monthly	² Monthly	³ Weekly	⁴ Daily or almost daily
308.	How often during the last year have you been unable to remember what happened the night before because of your drinking?	⁰ Never	¹ Less than monthly	² Monthly	³ Weekly	⁴ Daily or almost daily
309.	Have you or someone else been injured because of your drinking?	⁰ No		² Yes, but not in the last year		⁴ Yes, during the last year
310.	Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	⁰ No		² Yes, but not in the last year		⁴ Yes, during the last year

SOUTH AFRICA—ENGLISH

Section 3b: Drugs

Here are a few questions about drugs. Please answer as correctly and honestly as possible.

By drugs, we mean any of the following:

Cannabis: Marijuana, Hash, Hash oil, Dagga

Amphetamines: Methamphetamine, Phenmetraline, Khat, Betel nut, Ritaline, (Methylphenidate)

Cocaine: Crack, Freebase, Coca leaves

Opiates: Smoked heroin, Heroin, Opium

Hallucinogens: Ecstasy, LSD (Lisergic acid), Mescaline, Peyote, PCP (angel dust), (Phencyclidine), Psilocybin, DMT (Dimethyltryptamine)

Solvents/inhalants: Thinner, Trichlorethylene, Gasoline/petrol, Gas, Solution, Glue

GHB and others: GHB, Anabolic steroids, Laughing gas (Halothane), Amyl nitrate (Poppers), Anticholinergic compounds

Tik or rocks

Place an X in one box that best describes your answer to each question.

311.	How often do you use drugs other than alcohol? (see list of drugs above)	<input type="radio"/> Never (Go to next section)	<input type="radio"/> 1 Once a month or less often	<input type="radio"/> 2 2-4 times a month	<input type="radio"/> 3 2-3 times a week	<input type="radio"/> 4 4 times a week or more often
312.	Do you use more than one type of drug on the same occasion?	<input type="radio"/> Never	<input type="radio"/> 1 Once a month or less often	<input type="radio"/> 2 2-4 times a month	<input type="radio"/> 3 2-3 times a week	<input type="radio"/> 4 4 times a week or more often
313.	How many times do you take drugs on a typical day when you use drugs?	<input type="radio"/> 0	<input type="radio"/> 1 1-2	<input type="radio"/> 2 3-4	<input type="radio"/> 3 5-6	<input type="radio"/> 4 7 or more
314.	How often are you influenced heavily by drugs?	<input type="radio"/> Never	<input type="radio"/> 1 Less often than once a month	<input type="radio"/> 2 Every month	<input type="radio"/> 3 Every week	<input type="radio"/> 4 Daily or almost every day
315.	Over the past year, have you felt that your longing for drugs was so strong that you could not resist it?	<input type="radio"/> Never	<input type="radio"/> 1 Less often than once a month	<input type="radio"/> 2 Every month	<input type="radio"/> 3 Every week	<input type="radio"/> 4 Daily or almost every day
316.	Has it happened, over the past year that you have not been able to stop taking drugs once you started?	<input type="radio"/> Never	<input type="radio"/> 1 Less often than once a month	<input type="radio"/> 2 Every month	<input type="radio"/> 3 Every week	<input type="radio"/> 4 Daily or almost every day
317.	How often over the past year have you taken drugs and then neglected to do something you should have done?	<input type="radio"/> Never	<input type="radio"/> 1 Less often than once a month	<input type="radio"/> 2 Every month	<input type="radio"/> 3 Every week	<input type="radio"/> 4 Daily or almost every day
318.	How often over the past year have you needed to take a drug the morning after heavy drug use the day before?	<input type="radio"/> Never	<input type="radio"/> 1 Less often than once a month	<input type="radio"/> 2 Every month	<input type="radio"/> 3 Every week	<input type="radio"/> 4 Daily or almost every day
319.	How often over the past year have you had guilty feelings or a bad conscience because you used drugs?	<input type="radio"/> Never	<input type="radio"/> 1 Less often than once a month	<input type="radio"/> 2 Every month	<input type="radio"/> 3 Every week	<input type="radio"/> 4 Daily or almost every day
320.	Have you or anyone else been hurt (mentally or physically) because you used drugs?	<input type="radio"/> No		<input type="radio"/> 2 Yes, but not over the past year		<input type="radio"/> 4 Yes, over the past year
321.	Has a relative or a friend, a doctor, or a nurse, or anyone else, been worried about your drug use?	<input type="radio"/> No		<input type="radio"/> 2 Yes, but not over the past year		<input type="radio"/> 4 Yes, over the past year

SOUTH AFRICA—ENGLISH

Section 3c

Over the last 2 weeks, how often have you been bothered by the following problems?

322.	Feeling nervous, anxious, or on edge	⁰ Not at all (0-1 days)	¹ Several days (2-6 days)	² Over half the days (7-10 days)	³ Nearly every day (11-14 days)	
323.	Not being able to stop or control worrying	⁰ Not at all (0-1 days)	¹ Several days (2-6 days)	² Over half the days (7-10 days)	³ Nearly every day (11-14 days)	
324.	Worrying too much about different things	⁰ Not at all (0-1 days)	¹ Several days (2-6 days)	² Over half the days (7-10 days)	³ Nearly every day (11-14 days)	
325.	Trouble relaxing	⁰ Not at all (0-1 days)	¹ Several days (2-6 days)	² Over half the days (7-10 days)	³ Nearly every day (11-14 days)	
326.	Being so restless that it is hard to sit still	⁰ Not at all (0-1 days)	¹ Several days (2-6 days)	² Over half the days (7-10 days)	³ Nearly every day (11-14 days)	
327.	Becoming easily annoyed or irritable	⁰ Not at all (0-1 days)	¹ Several days (2-6 days)	² Over half the days (7-10 days)	³ Nearly every day (11-14 days)	
328.	Feeling afraid as if something awful might happen	⁰ Not at all (0-1 days)	¹ Several days (2-6 days)	² Over half the days (7-10 days)	³ Nearly every day (11-14 days)	
329.	If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?	⁰ Not difficult at all	¹ Somewhat difficult	² Very difficult	³ Extremely difficult	
330.	Has a healthcare provider ever told you that you have clinical anxiety?				¹ Yes	⁰ No (Go to next section)
330a.	If yes, are you current being treated for clinical anxiety (e.g. medication, therapy)?				¹ Yes	⁰ No

SOUTH AFRICA—ENGLISH

Section 3d

Below is a list of some of the ways you may have felt or behaved. Please indicate how often you have felt this way during the past week.

331.	I was bothered by things that usually don't bother me.	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
332.	I had trouble keeping my mind on what I was doing.	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
333.	I felt depressed.	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
334.	I felt that everything I did was an effort.	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
335.	I felt hopeful about the future.	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
336.	I felt fearful.	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
337.	My sleep was restless.	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
338.	I was happy.	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
339.	I felt lonely.	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
340.	I could not "get going."	<input type="radio"/> Rarely or none of the time (less than 1 day)	<input type="radio"/> Some or a little of the time (1-2 days)	<input type="radio"/> Occasionally or a moderate amount of time (3-4 days)	<input type="radio"/> All of the time (5-7 days)
341.	Has a healthcare provider ever told you that you have clinical depression?			<input type="radio"/> Yes	<input type="radio"/> No (Go to 342)
341a.	If yes, are you current being treated for clinical depression (e.g. medication, therapy)?			<input type="radio"/> Yes	<input type="radio"/> No

Section 3e

342.	Has there ever been a period of time when you thought about committing suicide?	a. In your lifetime?	<input type="radio"/> Yes	<input type="radio"/> No
		b. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
343.	Did you ever try to end your own life, whether or not you had thought about it ahead?	a. In your lifetime?	<input type="radio"/> Yes	<input type="radio"/> No
		b. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No

Section 3f: Social support

347.	<p>Who do you go to when you need someone to talk to about problems in your life?</p> <p><u>TICK ALL THAT APPLY</u></p>	<p><input type="checkbox"/> 1 Current partner(s) (at least one)</p> <p><input type="checkbox"/> 2 Family (at least one member)</p> <p><input type="checkbox"/> 3 Friends (at least one)</p> <p><input type="checkbox"/> 4 People I live with (at least one)</p> <p><input type="checkbox"/> 5 Healthcare providers (at least one)</p> <p><input type="checkbox"/> 6 People I work with (at least one)</p> <p><input type="checkbox"/> 7 People living nearby me (at least one)</p> <p><input type="checkbox"/> 8 LGBTI organisations</p> <p><input type="checkbox"/> 9 No one</p>
348.	<p>Who in your life knows that you are LGBTI?</p> <p><u>TICK ALL THAT APPLY</u></p>	<p><input type="checkbox"/> 1 Current partner(s) (at least one)</p> <p><input type="checkbox"/> 2 Family (at least one member)</p> <p><input type="checkbox"/> 3 Friends (at least one)</p> <p><input type="checkbox"/> 4 People I live with (at least one)</p> <p><input type="checkbox"/> 5 Healthcare providers (at least one)</p> <p><input type="checkbox"/> 6 People I work with (at least one)</p> <p><input type="checkbox"/> 7 People living nearby me (at least one)</p> <p><input type="checkbox"/> 8 LGBTI organisations</p> <p><input type="checkbox"/> 9 No one</p>
349.	<p>Of those, who have you told yourself about being LGBTI?</p> <p><u>TICK ALL THAT APPLY</u></p>	<p><input type="checkbox"/> 1 Current partner(s) (at least one)</p> <p><input type="checkbox"/> 2 Family (at least one member)</p> <p><input type="checkbox"/> 3 Friends (at least one)</p> <p><input type="checkbox"/> 4 People I live with (at least one)</p> <p><input type="checkbox"/> 5 Healthcare providers (at least one)</p> <p><input type="checkbox"/> 6 People I work with (at least one)</p> <p><input type="checkbox"/> 7 People living nearby me (at least one)</p> <p><input type="checkbox"/> 8 LGBTI organisations</p> <p><input type="checkbox"/> 9 No one</p>

SOUTH AFRICA—ENGLISH

Section 4 Experience of violence

This is the last section of the questionnaire. The following questions ask about your experiences with violence.

401.	Are you aware of anyone ever revealing that you are LGBTI to others without your permission?		<input type="radio"/> Yes	<input type="radio"/> No	
402.	Has anyone ever threatened to reveal that you are LGBTI to others without your permission?		<input type="radio"/> Yes	<input type="radio"/> No	
403.	Has anyone ever insulted or verbally harassed you because of being LGBTI?	a. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No	
		b. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No	
404.	Has an intimate partner (past or current) ever threatened to reveal that you are LGBTI to others without your permission?		<input type="radio"/> Yes	<input type="radio"/> No	
405.	Has an intimate partner (past or current) ever made you feel worthless because of being LGBTI?		<input type="radio"/> Yes	<input type="radio"/> No	
406.	Has an intimate partner (past or current) ever made you feel ashamed because of being LGBTI?		<input type="radio"/> Yes	<input type="radio"/> No	
407.	Have you ever been coerced, pressured or forced into marriage?		<input type="radio"/> Yes	<input type="radio"/> No	
408.	Have you ever been sexually assaulted	By an intimate partner of the same sex as you?	a. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			b. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
		By an intimate partner of a different sex than you?	c. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			d. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
		By someone you know (not an intimate partner but a neighbour, friend, family member, etc.)	e. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			f. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
		By a stranger	g. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			h. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
		By someone you live with? (an intimate partner or other person)	i. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			j. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
409.	Have you ever been physically assaulted	By an intimate partner of the same sex as you?	a. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			b. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
		By an intimate partner of a different sex than you?	c. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			d. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
		By someone you know (not an intimate partner but a neighbour, friend, family member, etc.)	e. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			f. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
		By a stranger	g. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			h. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No
		By someone you live with? (an intimate partner or other person)	i. In your life time?	<input type="radio"/> Yes	<input type="radio"/> No
			j. In the last 12 months?	<input type="radio"/> Yes	<input type="radio"/> No

SOUTH AFRICA—ENGLISH

If you answered **yes to sexual or physical assault in your life time**, please complete these questions:

We know that our sexual orientation and gender identity is not always easily separated. However, please choose the best response to these last questions.			
413.	Do you think any of these incidents (sexual or physical assault) were motivated by your sexual orientation?	<input type="radio"/> Yes	<input type="radio"/> No
414.	Do you think any of these incidents (sexual or physical assault) were motivated by your gender identity?	<input type="radio"/> Yes	<input type="radio"/> No
415.	Do you think any of these incidents (sexual or physical assault) were motivated by your body being intersex or not typically female/typically male?	<input type="radio"/> Yes	<input type="radio"/> No
416.	Did any of these incidents result in flashbacks, nightmares, or reliving the event?	<input type="radio"/> Yes	<input type="radio"/> No
417.	Have you avoided situations or people who remind you of the incident(s)?	<input type="radio"/> Yes	<input type="radio"/> No
418.	Following the incident(s), have you felt jumpy, irritable, or restless?	<input type="radio"/> Yes	<input type="radio"/> No

If you answered **yes to sexual or physical assault in the last 12 months**, please complete these questions:

410.	If you have experienced physical or sexual assault in the last 12 months, have you sought medical care for it?	<input type="radio"/> Yes	<input type="radio"/> No			
411.	If you have experienced physical or sexual assault in the last 12 months, have you reported it to the police ?	<input type="radio"/> Yes	<input type="radio"/> No			
412.	When seeking help for physical or sexual assault, how often do you think you have been treated with less courtesy than other people by police or healthcare staff for being LGBTI?	<input type="radio"/> Never	<input type="radio"/> Rarely	<input type="radio"/> Sometimes	<input type="radio"/> Often	<input type="radio"/> I have not sought help for physical or sexual assault

Thank you for your time in completing this survey! Please take a moment to check you have completed all of the questions.

Return this survey to the person who gave it to you when you are finished.

Thank you for telling us about your experiences of mental health, drug/alcohol use, and violence. If you would like to talk to someone about these things, please contact one of the below organisations:

Organisation	Contact details
Lifeline/Childline	Tel: (+27 11) 715-2000 Dicon number (switchboard cell) : 082-231-0805 Services: LifeLine offers individual counselling both face-to-face and by a 24-hour telephone counselling.
Addington hospital	Tel: +27 31 327 2000 16 Erskine Terrace, Durban, 4000
Ithembalabantu clinic (AIDS Healthcare Foundation)	Tel: +27 31 906 0452 Cell: 083 479 6093 162 Zwe Madlala Drive, Umlazi W Section, Umlazi, KwaZulu-Natal, 4031 Services: HIV counselling and testing

SOUTH AFRICA—ENGLISH

FAMSA	National office number: Tel: (011) 975 7106/7 FAMSA has centres in every province in South Africa . Go to this website if you wish to find the centre in your province: http://mzansiitsolutions.co.za/famsaorg/ Services: support and counselling to individuals, families, organisations and communities to build, restore and sustain functional relationships.
SANCA	Toll free number: 086 14 72622 Phone: 011 892 3829 SANCA has centres in every province in South Africa . Go to this website if you wish to find the centre in your province: http://www.sancanational.info/#/contact/c1z0x Services: treatment and counselling for addiction
TB HIV CARE	Tel: 021 425 0050 25 St Georges Mall, Cape Town 8001
Triangle Project (LGBTI organisation)	Helpline: 0217126699 2nd Floor, Leadership House, Green Market Sq, Cape Town Services: trans support group, drug alcohol addiction support, counselling services for LGBTI people, general and HIV clinical services for LGBTI people
OUT LGBT Well-being (LGBTI organisation)	Tel: 012 430 3272 Fax: 012 342 2700 Email: hello@out.org.za 1081 Pretorius street, Hatfield, Pretoria
Durban Lesbian & Gay Centre & Health Centre (DBN) (LGBTI organisation)	Tel: 031 312 7402 Fax: 031 312 8838 Email: admin@gaycentre.org.za Whatsapp: 083 748 9565 No.42 McKenzie Road, Morningside, Durban, 4001
Gender Dynamix (Transgender advocacy and support organisation)	Tel: 021 447 4797 Email: info@genderdynamix.org.za Unit 21, Collingwood Building, 10 Anson Street, Observatory, Cape Town

For research staff use only:

I, the fieldworker , have reviewed this questionnaire for completeness and accuracy.	
Fieldworker signature: _____	Date: _____
I, the research coordinator (or designee) , have reviewed this questionnaire for completeness and accuracy.	
Coordinator/designee signature: _____	Date: _____
I, the GHJRU research staff member , have reviewed this questionnaire for completeness and accuracy.	
GHJRU signature: _____	Date: _____
I, the data enterer , have completed data entry of this questionnaire and assigned a unique identifier.	
Data enterer signature: _____	Date: _____

Notes

