Are we doing alright?

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

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 Malawi: Research report based on a community-led study in nine countries'*. Amsterdam: COC Netherlands.

Contributors to the Malawi country report:

The research team in Malawi consisted of Rodney Chalera, Victor Gama, and fieldworkers from the Centre for the Development of People.

This report is part of a series of ten reports.

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 Malawi

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

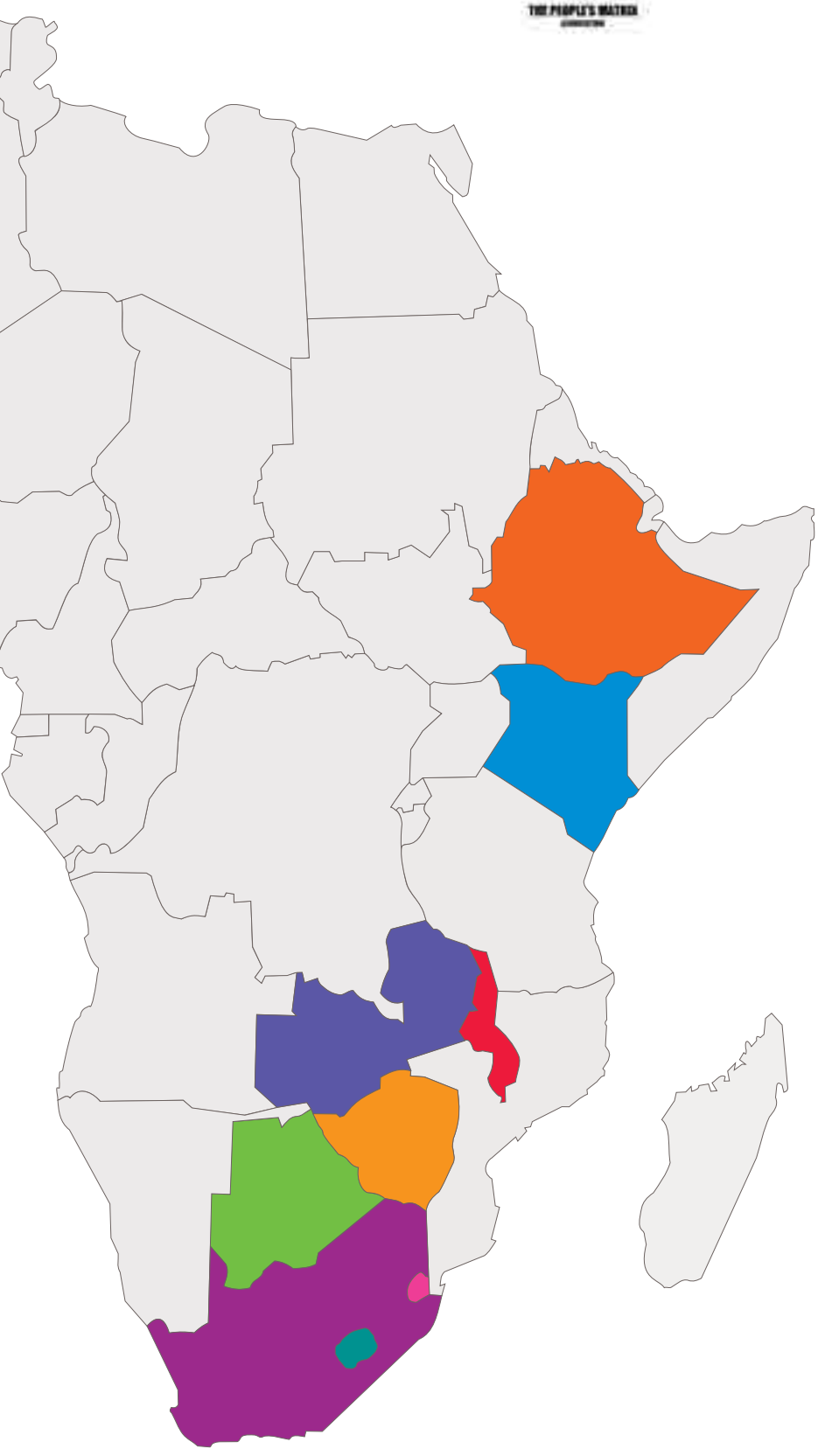
Gender Health and Justice Research Unit, University of Cape Town

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

List of tables

List of Figures

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 Malawi. 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 intersex[1]) 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 minority[2] 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 forth, 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-bring of sexual minority[3] 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: Malawi. 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 forth 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 Morroni 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	
	Names of the two organisations withheld for safety reasons
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 MALAWI

Sexual orientation, gender identity and expression in Malawi

Malawi gained independence from Britain in 1964. Following independence, it was ruled by Hastings Banda in a 30-year long dictatorship. Banda enforced a strict Christian nationalism. In 1994, Malawi held its first multiparty elections after Banda, and drafted a new constitution.

While the Malawian Constitution affirms non-discrimination and human rights, it does not make specific mention of sexual orientation or gender identity. At the same time, sections of the Malawian Penal Code, which are remnants of the British colonial Penal Code and have remained unchanged and carried over after independence, continue to criminalise sex between people of the same sex or gender. Section 153 of Malawi's Penal Code states that having "carnal knowledge" – or "permitting a man to have carnal knowledge" - of any person against the order of nature is punishable by a fourteen-year prison term. Section 154 of the Penal Code criminalizes attempting to commit an "unnatural offence," which is punishable by up to seven years in prison. Further, Section 156 criminalizes "indecent practices", which warrants five years in prison for acts of gross indecency (Global Legal Research Centre, 2014). In December 2010, Malawi's Parliament passed a bill which amended the Penal Code of Malawi to include Section 137A on "Indecent practices between females". The bill was signed into law in January 2011, making it illegal for any female person to commit acts of "gross indecency" with another female, punishable by a prison term of five years (Carroll and Itaborahy, 2015). Even though the Penal code only criminalises same-sex sexual activity, individuals can also be arrested on suspicion of homosexuality.

In 2004 the Malawi Law Commission invited activist organizations to recommend laws in need of reform. The Malawi Human Rights Resource Centre recommended the repeal of sodomy provisions in the Penal Law and the inclusion of a non-discrimination clause on sexual orientation and gender identity (SOGI). At the time, however, political and religious leaders rejected the recommendations, reinforcing the state's anti-homosexuality position. In 2012, the Minister of Justice and Constitutional Affairs announced a moratorium on arrests under the 'sodomy' provisions of the Penal Code and suggested that these provisions might be unconstitutional. In 2013, the Malawi High Court announced its intention to review the constitutionality of the Penal Code sections, but to date has not reached a decision (The Other Foundation, 2016).

There is no anti-discrimination provision to protect individuals from being discriminated against on the basis of their sexual orientation and/or gender identity (Johnston, 2014). Same-sex relationships are deemed immoral by cultural norms and religious ideologies in Malawi. Afrobarometer-Malawi data shows that 94% of Malawians disagreed that people practicing same-sex relationships should have the right to do so (Dionne et al., 2014). Widely made homophobic statements by the media, religious groups, NGOs, and the government contribute to high levels of fear within the LGBTI community. The political homophobia in Malawi escalated in 2010 when the government prosecuted Tiwonge Chimbalanga, a transgender woman, and Steven Monjeza, a cisgender man, under Section 153 of the Penal Code. Since then, homophobia has saturated national politics. In this environment, HIV/AIDS, human rights, and feminist activists have limited their public expressed support for LGBT rights (Currier, 2014). Their concern is that acting in solidary with organisations defending LGBT rights would pose "a toll on individual activists and on organisations". Nevertheless, one of the leading organisations for LGBTI human rights in Malawi is the Centre for the Development of People (CEDEP). The organisation aims to provide support to minority groups and provides sexual health services.

In this context, LGBTI people in Malawi experience high levels of stigma and discrimination, including blackmail and the denial of services such as housing and healthcare (Johnston, 2014). A recent report by Human Rights Watch documents and details that LGBTI people experience police abuses, arbitrary arrests and detention, as well as violence in public spaces that usually is not reported (Human Rights Watch, 2018).

There is a lack of sensitivity about sexual orientation and gender identity, which exposes LGBTI people to stigma, discrimination, violence, rape, and blackmail from members of the police, the judiciary, and other government officials in Malawi. Of special concern are reports of stigma and discrimination in health facilities (Human Rights Watch, 2018), and reports that healthcare providers report sexual and gender minority people under Section 153 of the Penal Code, despite the fact that there is no legal obligation to do so (Müller and Daskilewicz, 2018). This makes seeking healthcare a dangerous gamble for many LGBTI Malawians.

The study population: sample characteristics

In Malawi, we collected survey data only on paper. Participants filled out surveys by themselves (self-administration) or with the assistance of a fieldworker (fieldworker-administration).

On paper, a total of 203 surveys were filled out through the partner organisation CEDEP. Of these 203 responses, 6 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 in analysis. All participants reached the 'outcomes' section of the survey, and therefore none were excluded on the basis of the questionnaire being incomplete. Included in the analysis were 197 participants (Figure 1).

FIGURE 1: Malawi participant sample

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

We therefore analysed 197 participant responses from Malawi. Of these, 43% filled out the survey on their own, and 57% filled it out with the help of a fieldworker. All except one survey was collected through the partner organisation, CEDEP. One survey was collected by a partner organisation in Kenya. Because that participant said they lived in Malawi, the survey response is included here in the Malawi sample (and was not included in the Kenya sample).

Sociodemographic characteristics

Table 4 shows detailed information about participants' demographics (characteristics of the sample). The average (median) age was 24 years, with the youngest participant being 18 years old, and the oldest 52 years old. The group of participants was quite young: half (51%) were under the age of 24. More than half of participants lived in urban areas (58%), just over a third (36%) lived in peri-urban areas (urban outskirts), and 5% lived in a rural area. Three quarters of participants (77%) listed Christianity as their faith, and 17% Islam.

TABLE 4: Sociodemographic characteristics

	n	%
Age group	(n=194)	
18-24	99	51.03
25-34	83	42.78
35-44	11	5.67
45-54	1	0.52

	n	%
Race	(n=194)	
Black	180	92.78
White	2	1.03
Coloured	10	5.15
Other	2	1.03

What type of area do you live in?	(n=195)	
Urban	114	58.46
Semi-urban/Peri-urban	71	36.41
Rural	10	5.13

Religious beliefs	(n=196)	
African tradition	2	1.02
Islam	33	16.84
Christianity	150	76.53
Rastafarianism	2	1.02
Not religious	7	3.57
Other, specify	2	1.02

Sexual and gender diversity / sexual orientation and gender identity

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 were allowed to participate in the survey, every participant was a sexual minority and/or gender minority. 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 (for example, see Table 5).

TABLE 5: 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	GNC	Total
Lesbian	18	7	1	18	1	46
Bisexual	1	33	1	2	0	38
Gay	9	39	37	3	2	93
Asexual	1	1	0	0	0	2
'Transgender'	3	3	6	2	0	14
Other	0	1	1	2	1	4
Total	32	84	46	25	4	197

Table 5 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 5, we did not categorise participants based on same-sex sexual experiences or the sex they were assigned at birth. Thus, Table 5 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 category 'transgender' because it was a relatively common responses under the category of 'other'. A total of 14 participants wrote in that they identify their *sexual orientation* as 'transgender', which is widely understood to be a gender identity. 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

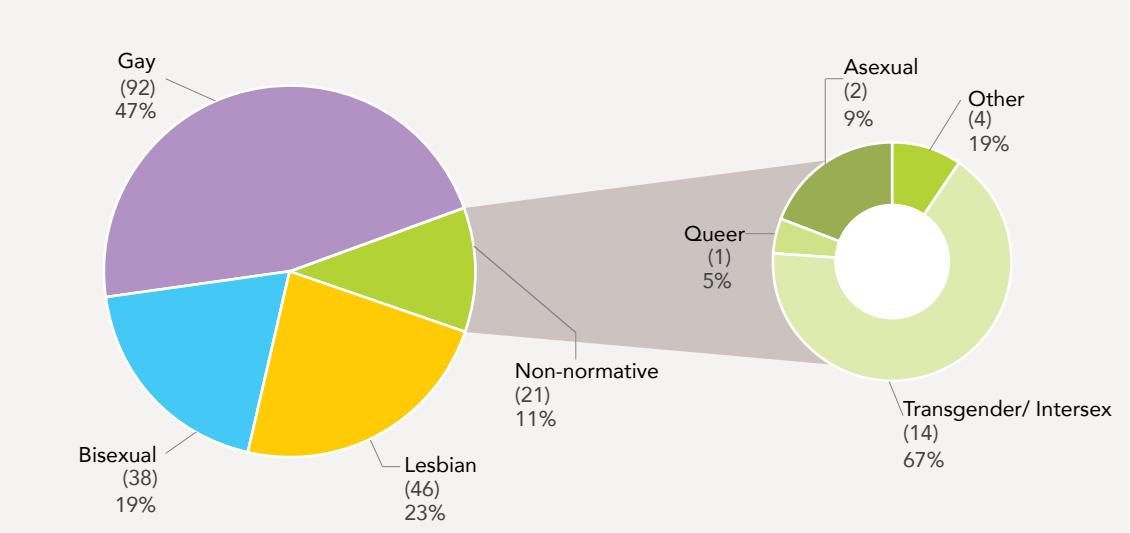
We considered anyone who did not identify as heterosexual to be a sexual minority (see Table 5 and Figure 2), as well as anyone who had not had sex in the past year but was exclusively sexually attracted to people of the same sex/gender or had had sexual experiences exclusively with a partner or partners of the same sex or gender in the past year, even if they self-identified as heterosexual (in Malawi, no participants self-identified as heterosexual). 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 Malawi, every participant was a sexual minority (100%).

Figure 2 displays participants' sexual orientations. Participants who were classified as gay, lesbian and bisexual made up the majority of the sample. Eleven per cent of participants had identified as a range of other sexual orientations (for example as queer, 'transgender', or asexual). However, the number of responses within some of these individual sexual orientation categories was too small to be meaningfully used in statistics (for example there was only one participant who identified as queer), so we could not analyse them in their individual groups. Figure 2 breaks down the composition of the 'non-normative' sexual orientation category. This 'non-normative' category is very heterogeneous (full of different identities).

FIGURE 2: Participants' sexual orientations



Gender minorities

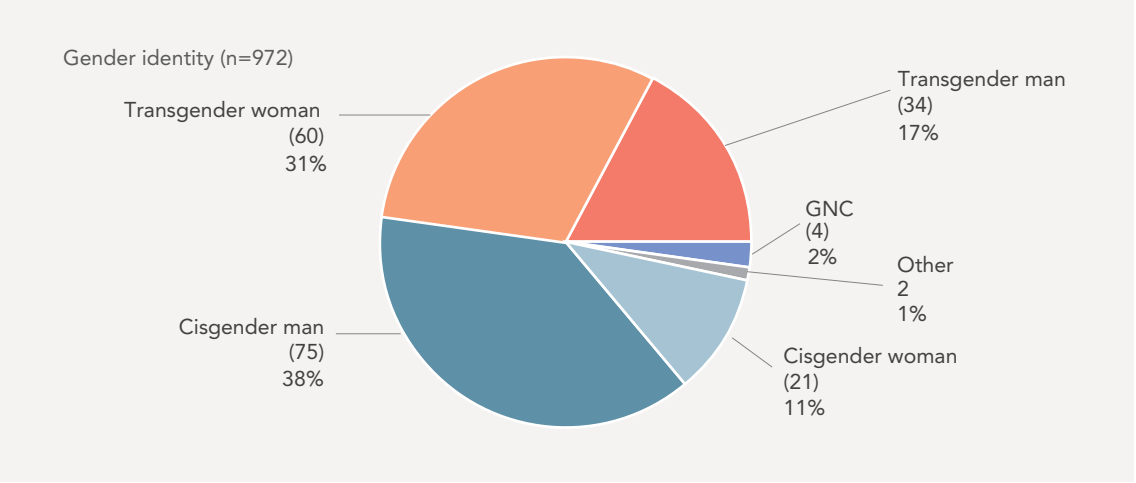
In order to identify gender minority participants, we asked two questions: How did participants self-identify their gender identity (see Table 5), and what sex was assigned to participants at birth. Based on these parameters, we defined gender minority participants as:

1. those who self-identified as transgender women, transgender men, gender non-conforming (GNC) or other;
2. those whose gender identity was different from the sex assigned to them at birth (n=20, 10% of all participants).

In total, 100 participants (51%) 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 3 displays participants' gender identities.

FIGURE 3: Participants' gender identity



Two participant identified their gender identity as 'other', and entered the following: 'do not really know' and 'I get attached to both.' These two were counted in the 'other' category. 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 6 details participants' socioeconomic status. For many key outcomes in this report, we report statistics for gender minority participants as a subgroup of the overall sample. We use this approach to highlight times when gender minority people, in comparison to cisgender people, may be particularly vulnerable due to stigma and persistent socio-economic disparities.

TABLE 6: Social and financial capital, overall sample and by gender identity

Overall sample (n=197)			**Gender minority participants (n=100)**		
	n	%	n	%	p
Housing type	(n=196)		(n=99)		
Categorical					0.648
House	185	94.39	95	95.96	
Apartment/flat/garden cottage	8	4.08	3	3.03	
Hotel	1	0.51	0	0.00	
Mobile house	2	1.02	1	1.01	
Binary					0.543
Informal	3	1.53	1	1.01	
Formal	193	98.47	98	98.99	

Overall sample (n=197)			Gender minority participants (n=100)		
	n	%	n	%	p
Housing security	(n=196)		(n=100)		0.013*
Owns home	18	9.18	12	12.00	
Rents home	118	60.20	50	50.00	
Shares housing without paying	60	30.61	38	38.00	
Highest completed level of education	(n=196)		(n=99)		0.636
No formal education	0	0.00	0	0.00	
Primary education	9	4.59	5	5.05	
Secondary school (matric)	134	68.37	70	70.71	
Post-secondary school/ University diploma or degree	53	27.04	24	24.24	
Employment	(n=189)		(n=95)		0.246
No employment	122	64.55	67	70.53	
Formal employment	30	15.87	12	12.63	
Informal employment	37	19.58	16	16.84	
Sufficient money for basic needs	(n=186)		(n=95)		0.465
No	147	79.03	77	81.05	
Yes	39	20.97	18	18.95	
Has medical aid	(n=177)		(n=94)		0.990
No	134	75.71	71	75.53	
Yes	43	24.29	23	24.47	

*Chi square/Fisher's exact test p-value significant, at $p<0.05$

Almost every participant (98%) lived in housing or apartments (formal, stable housing structures). Of the other 2%, two lived in mobile houses and one in a hotel (informal, unstable, or transient housing). No participants lived on the street. Housing security was also a challenge: only 9% owned their home. Sixty percent were renting their home and 31% shared a home without paying.

Levels of education were reported as high in the overall sample: 95% had completed secondary education, and just over a quarter of all participants had completed a post-secondary educational degree (for example, a tertiary degree or a post-secondary diploma; 27%).

Many participants were in financially precarious situations: almost two-thirds did not have a paid job (65%), and another 16% held informal jobs, without contracts. Further, 79% said they did not have enough money to cover their basic needs.

Only 24% of participants had private health insurance (medical aid).

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 7.

TABLE 7: Social support and being 'out'

	Overall sample (n=197)		Gender minority participants (n=100)		
	n	%	n	%	p
Who they go to for support	(n=192)		(n=97)		
Current partner(s)	114	59.38	54	55.67	0.319
Family member(s)	67	34.90	25	25.77	0.010*
Friend(s)	109	56.77	54	55.67	0.804
Person/people living with	23	11.98	13	13.40	0.557
Healthcare provider(s)	23	11.98	13	13.40	0.557
Co-worker(s)	18	9.38	8	8.25	0.747
Person/people living nearby	10	5.21	4	4.13	0.697
LGBTI organisations	99	51.56	52	53.61	0.518
Who knows their SOGI	(n=192)		(n=97)		
Current partner(s)	139	72.40	65	67.01	0.100
Family member(s)	78	40.62	39	40.21	0.975
Friend(s)	130	67.71	69	71.13	0.281
Person/people living with	41	21.35	23	23.71	0.339
Healthcare provider(s)	35	18.23	18	18.56	0.782
Co-worker(s)	25	13.02	15	15.46	0.323
Person/people living nearby	26	13.54	16	16.49	0.238
LGBTI organisations	156	81.25	78	80.41	0.791

*Chi square/Fisher's exact test p-value significant, at $p<0.05$

Overall, participants reported having the most social support from their current partners (59%), friends (57%) and LGBTI organisations (52%) and were likewise more likely to be out to these people than others in their lives. Although about 40% of both cisgender and gender minority participants reported being out to their family, gender minority participants were less likely to go to family members for support ($p<0.05$).

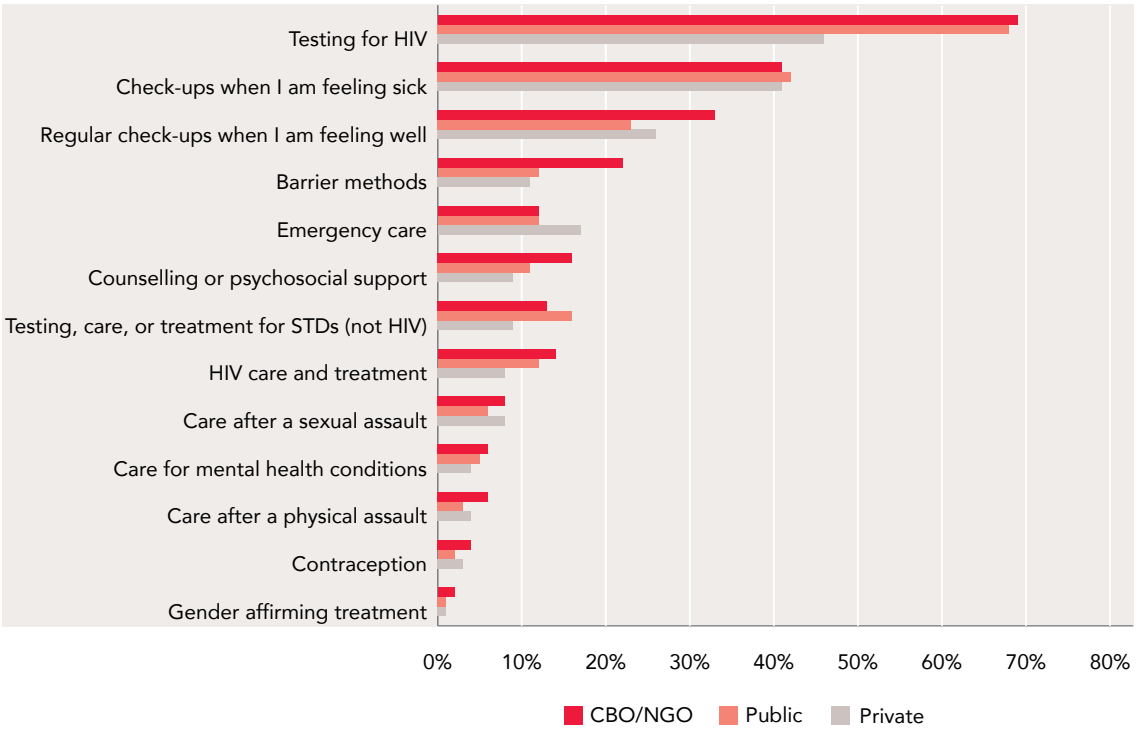
Only 18% of participants had disclosed their sexual orientation or gender identity to a healthcare provider.

Health-seeking behaviour

We asked participants what health services they had sought in the previous year, and where they had gone for these services. About a quarter of participants (24%) had private health insurance.

Figure 4 shows health services that people had used in the previous year – NGOs, public healthcare facilities or private health care facilities. Overall, participants had most often gone to a health service for HIV testing, when they were feeling sick, or for regular check-ups when well. Participants reported using a mix of private, public and NGO healthcare, with private being the least used. For most health concerns, NGOs were the most used source of care. Very few participants had accessed health facilities for gender affirming care. We explore this further in the following section.

FIGURE 4: Health-seeking behaviour in previous year



Gender affirming care

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 8. These findings are important because gender affirming practices such as binding[4] are proven to support people's gender identity and expression, reduce psychological distress and increase their safety in public (Manderson 2012,

4 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.

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.

Most gender minority participants did not use gender-affirming practices. Similar numbers of those assigned female at birth and those assigned male at birth used binding and tucking (18% and 17%, respectively). Only 5% of gender minority participants used hormones for gender affirmation.

TABLE 8: Gender affirming practices

Gender minority participants (n=100)		
	n	%
Binding (among those assigned female at birth, n=33)	6	18.18
Tucking (among those assigned male at birth, n=65)	11	16.92
Hormones (n=97)	5	5.15

While not all gender minority people need or desire gender affirming care, access also impacts the level of hormone use among gender minority participants. Therefore, Table 8 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 any of these). Table 9 shows that access to both hormonal and surgical gender affirmation was very low: about one in ten gender minority participants had access to hormone treatment (11%) and surgical procedures (12%).

TABLE 9: Access to gender affirming care

Access to gender-affirming care for gender minority participants (n=100)		
	n	%
Access to hormones (n=95)	10	10.53
Access to surgical procedures (n=95)	11	11.58

Discrimination in healthcare

We 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 in the overall sample and among gender minority participants. Table 10 describes these differences by these categories.

TABLE 10: Healthcare access and discrimination

	Overall sample (n=197)		Gender minority[5] participants (n=100)		
	n	%	n	%	p
Disclosed SOGIE to healthcare provider	(n=197)		(n=100)		
Yes	82	41.62	48	48.00	0.074
Has tried to hide SOGIE-related health concern from healthcare provider	(n=190)		(n=99)		
Yes	49	25.79	30	30.30	0.150
Have you been treated disrespectfully because of your SOGIE?	(n=195)		(n=99)		
Categorical					0.466
Never	103	52.82	54	54.55	
Rarely	24	12.31	13	13.13	
Sometimes	55	28.21	24	24.24	
Often	13	6.67	8	8.08	
Binary					0.679
No (Never)	103	52.82	54	54.55	
Yes (Rarely/Sometimes/Often)	92	47.18	45	45.45	
Have you been called names or insulted in a health facility because of your SOGIE?	(n=194)		(n=98)		
Categorical					0.002*
Never	114	58.76	53	54.08	
Rarely	27	13.92	12	12.24	
Sometimes	34	17.53	16	16.33	
Often	19	9.79	17	17.35	
Binary					0.153
No (Never)	114	58.76	53	54.08	
Yes (Rarely/Sometimes/Often)	80	41.24	45	45.92	

5 Gender minority refers to all participants who were transgender, gender non-conforming or 'other' gender identities

	Overall sample (n=197)		Gender minority[5] participants (n=100)		
	n	%	n	%	p
Have you been denied healthcare because of your SOGIE?	(n=195)		(n=99)		
Categorical					0.511
Never	128	65.64	62	62.63	
Rarely	24	12.31	14	14.14	
Sometimes	32	16.41	16	16.16	
Often	11	5.64	7	7.07	
Binary					0.314
No (Never)	128	65.64	62	62.63	
Yes (Rarely/Sometimes/Often)	67	34.36	37	37.37	

*Chi square/Fisher's exact test p-value significant, at $p<0.05$

In this section of the questionnaire, less than half of participants (42%) reported having told a healthcare provider about their sexual orientation and/ or gender identity. More than a third of participants had been denied healthcare (34%) and 41% said they had been called names or been insulted by healthcare staff at some point. Findings were similar among cisgender and gender minority participants.

Participants' sexual orientation and gender identity also directly influenced healthcare, as one in four (26%) participants had tried to hide a health concern related to their sexual orientation or gender identity from a healthcare provider.

Overall, our findings confirm and quantify the presence of SOGIE-related prejudice and stigma in the healthcare system in Malawi, which other researchers have also highlighted (Müller and Daskilewicz, 2018; Müller *et al.*, 2018, Muula et al., 2017). Muula and colleagues (2017) have argued that experiences of discrimination and prejudice in the healthcare system are important structural barriers to healthcare access for men who have sex with men and transgender women (and other sexual and gender minorities). Our findings show that such experiences are widespread in the Malawian healthcare system.

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 11 shows the findings for participants overall, and for gender minority participants.

TABLE 11: Harassment and violence, overall sample and gender identity

	Overall sample (n=197)		Gender minority participants (n=100)		
	n	%	n	%	p
SOGIE-related verbal harassment					
Experienced in lifetime	(n=194)		(n=97)		
	129	66.49	76	78.35	<0.001*
Experienced in past year	(n=183)		(n=90)		
	94	51.37	56	62.22	0.003*
Sexual violence					
Experienced in lifetime	(n=195)		(n=98)		
	81	41.54	46	46.94	0.139
Experienced in past year	(n=195)		(n=98)		
	66	33.85	39	39.80	0.086
Physical violence					
Experienced in lifetime	(n=196)		(n=99)		
	81	41.33	49	49.49	0.022*
Experienced in past year	(n=196)		(n=99)		
	65	33.16	43	43.43	0.002*

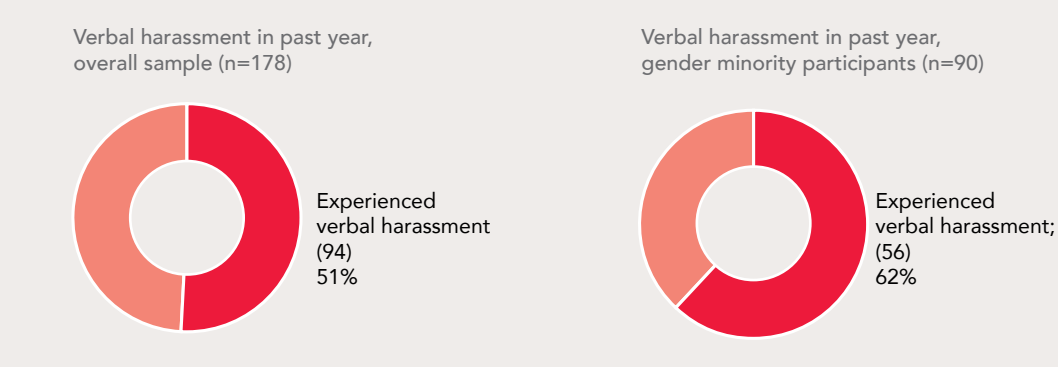
*Chi square/Fisher's exact test p-value significant, at p<0.05

Past research across the world has shown that LGBTI people are vulnerable to violence (Blondeel et al., 2018). In summary, our findings confirm these findings for Malawi. In our study, the different levels of verbal harassment according to gender identity are noteworthy. Compared to cisgender participants, gender minority participants experienced significantly higher levels of verbal harassment and physical violence. In the following subsections, we discuss the different forms of violence (verbal, sexual and physical) in detail.

Verbal harassment

Two thirds (66%) of participants had experienced verbal harassment due to their sexual orientation and/or gender identity or expression at some point in their life, and half (51%) in the previous year (Figure 5). This number was even higher for gender minority participants: more than three in four gender minority participants (78%) had experienced verbal harassment at some point in their life, and almost two thirds (62%) in the previous year. This confirms findings from a recent study with transgender Malawians, in which three quarters (73%) said they had been verbally harassed in the previous year (Umar et al., 2018).

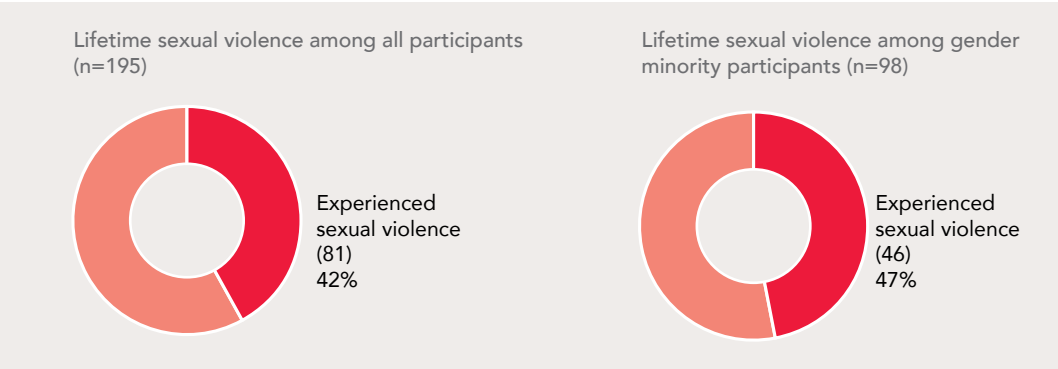
FIGURE 5: Verbal harassment, past year



Sexual violence

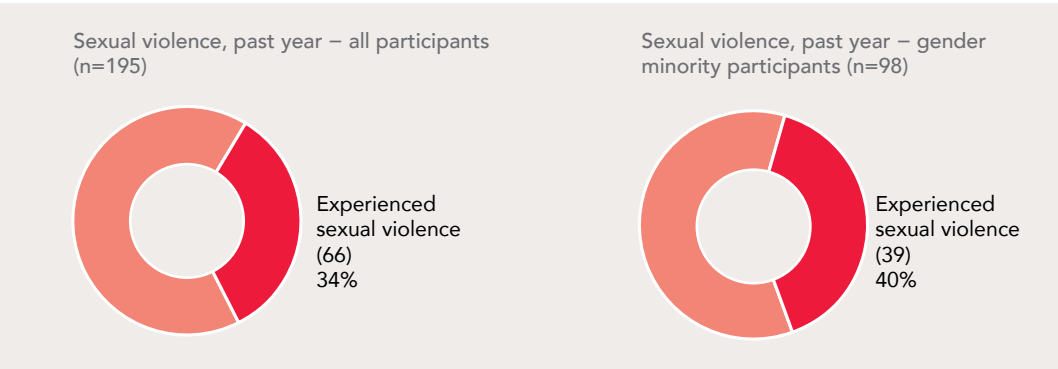
Forty-two percent of all participants were survivors of sexual violence (Figure 6). This number was almost the same (47%) when we looked at only gender minority participants.

FIGURE 6: Sexual violence, lifetime



Of the overall participant group, one in three participants (34%) had experienced sexual violence in the previous year (Figure 7). Of gender minority participants, it was 40% of participants.

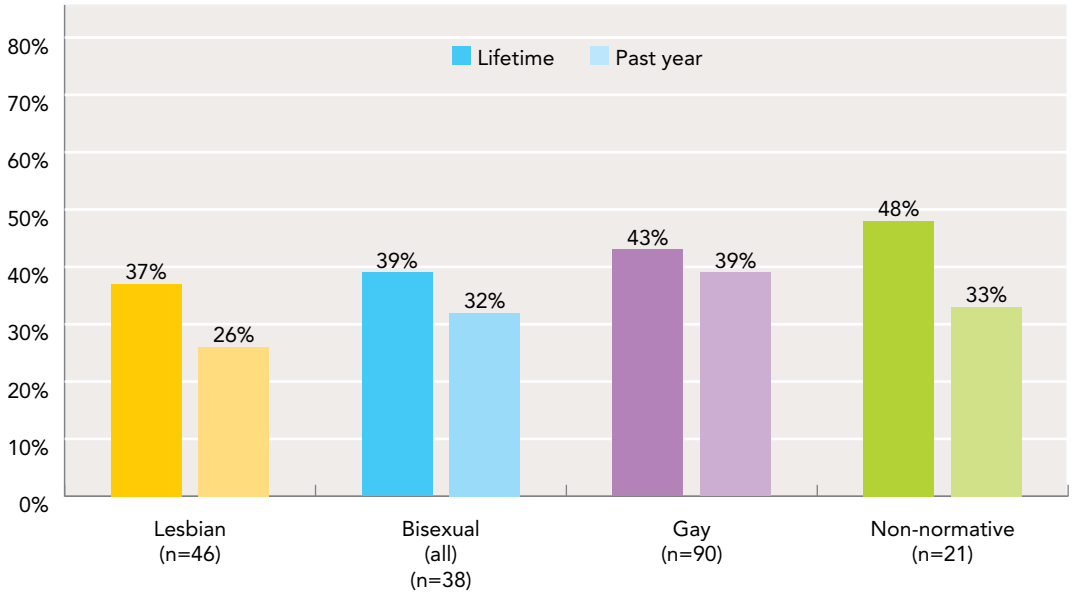
FIGURE 7: Sexual violence, past year



When disaggregated by sexual orientation and gender identity (see Figure 8 and Figure 9, and the tables on lesbian, bisexual and gay health), we found that more than one in three (37%) of lesbian participants had experienced sexual violence in their lifetime (one in four (26%) in the

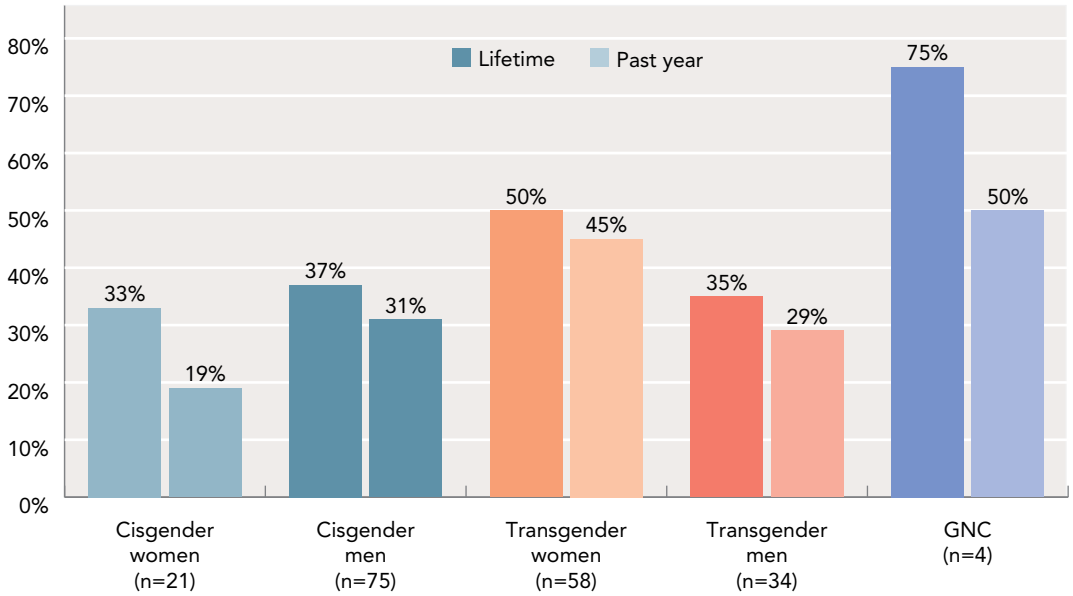
past year). Of all participants who identified as gay, 43% had experienced sexual violence in their lifetime, and 39% in the previous year. Of all bisexual participants, 39% had experienced sexual violence in their lifetime, and 32% in the past year.

FIGURE 8: Sexual violence, by sexual orientation



Among transgender women and gender non-conforming people, the levels of sexual violence were higher for both lifetime sexual violence and sexual violence experienced in the past year, compared with cisgender participants and the overall sample (see Figure 9). For example, three in four (75%) gender non-conforming people had experienced sexual violence in their life, compared to one in three (33%) cisgender women. Among transgender women, half (50) had experienced sexual violence at some point in their life, and almost half (45%) in the past year.

FIGURE 9: Sexual violence, by gender identity



We now compare our findings to what we already know from other research. Two recent studies looked at the experience of sexual violence among women in Malawi's general population. We will assume that the majority of these women are cisgender and heterosexual. The latest Demographic and Health Survey, published in 2017, found that one in five women in the general population (20%) had experienced sexual violence (National Statistical Office (NSO) [Malawi] and ICF, 2017). Another study from 2005 found a similar number, with 18% of women saying that they had experienced sexual violence (Pelser *et al.*, 2005). Compared to the levels of sexual violence experienced by women in the general population, the sexual and gender minority people in our sample had experienced much higher levels of sexual violence. The level of sexual violence experiences among lesbian participants in our study is almost double that of women in the general population (37% versus 20% respectively). When we compare gender non-conforming people in our sample to women in the general population, we see that the levels of sexual violence experienced by gender non-conforming people is more than triple that of women in the general population (75% versus 20%). The levels of sexual violence experienced by transgender women is 2.5 times as much as experienced by women in the general population (50% versus 20%).

In a study about male survivors of sexual violence in rural Malawi, 10% of men reported being a victim of sexual coercion (Conroy and Chilungo, 2014). Most participants in this study were married men, and the authors did not disaggregate by sexual orientation or gender identity. We assume that most of the participating men are cisgender and heterosexual. Compared to the level of sexual violence experienced by the men in Conroy & Chilungo's study, participants in our study who identified as gay had experienced more than 4 times more sexual violence. Transgender men in our study had experienced more than 3 times more sexual violence.

Compared to the studies in the general population (Pelser *et al.*, 2005; Conroy and Chilungo, 2014; National Statistical Office (NSO) [Malawi] and ICF, 2017), we used different questions about experiences of sexual violence, and these questions were asked by fieldworkers who worked for an LGBTI organisations, which might have made them more trustworthy than fieldworkers working for a general research study. This might have contributed to a higher level of reporting of sexual violence among our sample. Nevertheless, the vast difference in sexual violence prevalence cannot only be explained by methodological differences. Our findings strongly suggest that sexual orientation and gender identity itself are important factors that render sexual and gender minority people more vulnerable to sexual violence.

There are no studies on violence experienced by sexual and gender minority people in Malawi. One recent study draws on data on transgender women and men who have sex with men, collected in 8 countries (Poteat *et al.*, 2017). One of these countries is Malawi, but the data for Malawi is not reported separately. This study found that across these 8 countries, 28% of transgender women said that they had been raped. This is much lower than the levels of sexual violence reported by transgender women in our study (50%). In the absence of specific data for Malawi, however, it is difficult to think about why this is so different. It could that the levels of sexual violence experienced by transgender women in Malawi was higher in Poteat et al.'s study (2017b), but that it is low in other countries, and hence the overall data shows it is lower. The reported levels of sexual violence among transgender women might also be higher in our study because we asked detailed questions about different times and perpetrators of sexual violence, while Poteat

et al.'s study (2017) asked only one question. Previous research has shown that if studies ask multiple questions about sexual violence, they are likely to find higher levels of violence. In fact, our findings are similar to the findings from the 2015 United States Transgender Survey, which showed that nearly half of transgender people (47%) have been sexually assaulted at some point in their lifetime (James *et al.*, 2016a).

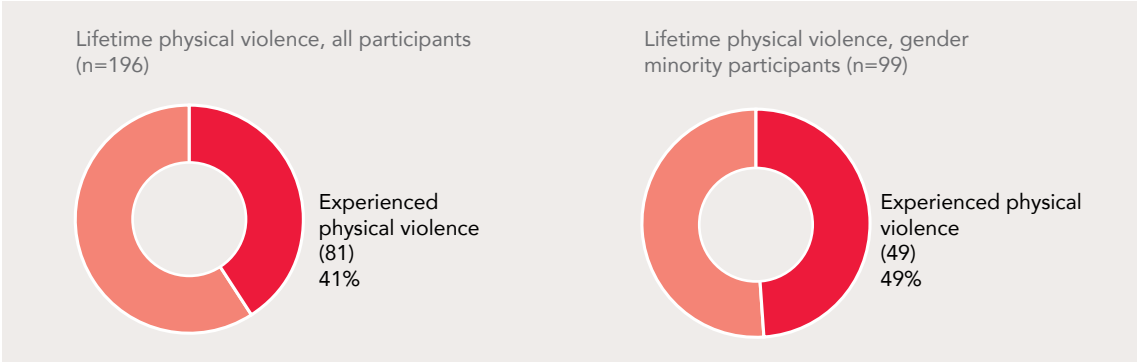
Our study did not collect data on the prevalence of sex work among participants. However, existing evidence shows that gender minority people, are more likely to participate in sex work due to systemic, institutional and interpersonal discrimination that limits their access to education and work opportunities (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 high prevalence of sexual violence, as well as other forms of violence in our study.

On the whole, our findings point out that a significant amount of LGBTI people in Malawi are survivors of sexual violence, and that many have experienced sexual violence recently. This is very likely to have an impact on people's well-being, as well as on their physical health. 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 depression and post-traumatic stress disorder, and higher likelihood of attempting suicide (Krug *et al.*, 2002). There is thus 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.

Physical violence

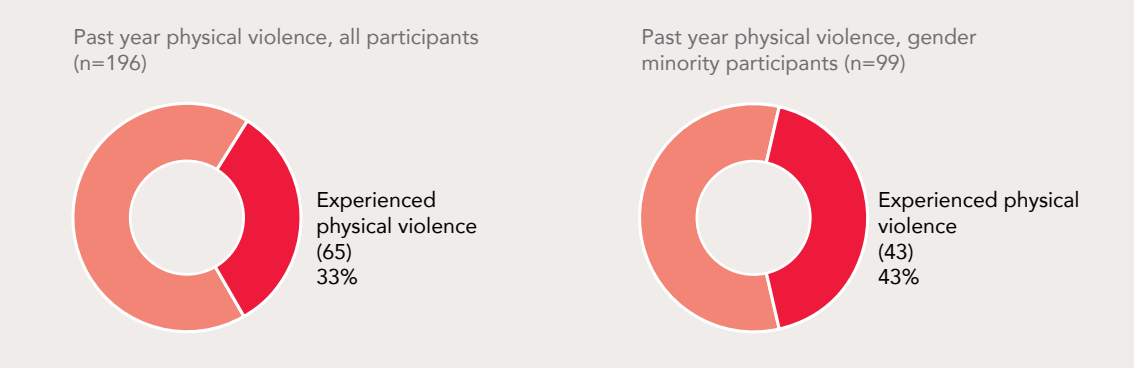
Two in five participants (41%) in our study had experienced some form of physical violence at some point in their lives (Figure 10). Among gender minority participants, it was half (49%).

FIGURE 10: Physical violence, lifetime



In the year prior to answering the survey, one in three participants (33%) had experienced physical violence (Figure 11). When examining gender minority participants, it was significantly more, with 43% of participants having experienced physical violence in the past year.

FIGURE 11: Physical violence, past year



The levels of physical violence were similar among lesbian, bisexual and gay participants – more than one third had experienced physical violence at some point in their life, and between a quarter and a third had experienced physical violence in the past year (Figure 12, see also Table 15, Table 16 and Table 17). Experiences of physical violence were slightly higher among participants with non-normative sexual orientations (half had experienced physical violence in their lifetime, and more than a third in the past year) – this might have been because a large proportion of them also identified as gender minorities (see the following paragraph).

FIGURE 12: Physical violence, by sexual orientation

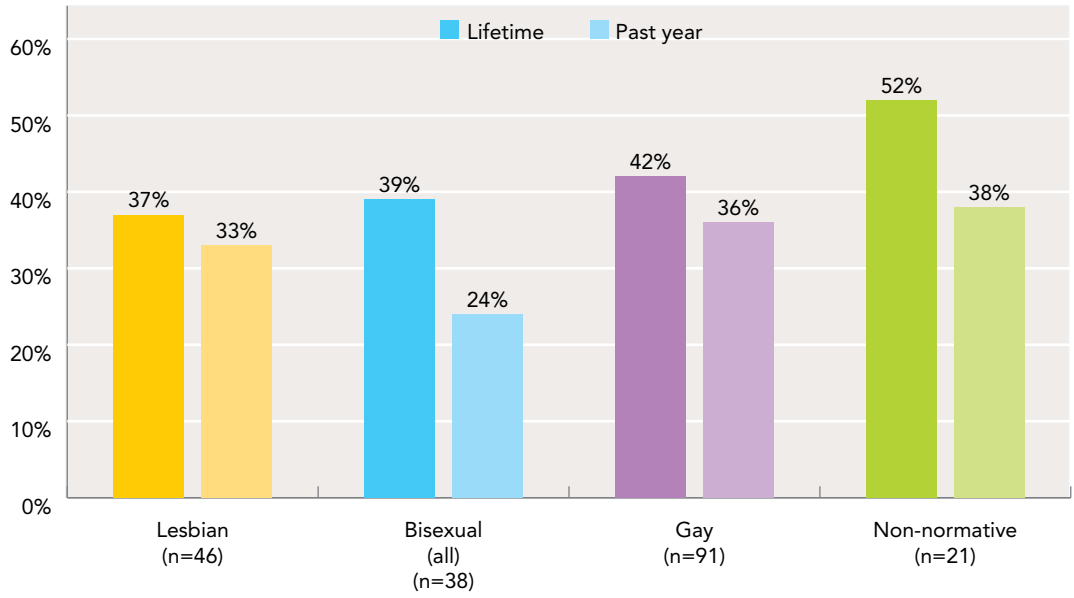
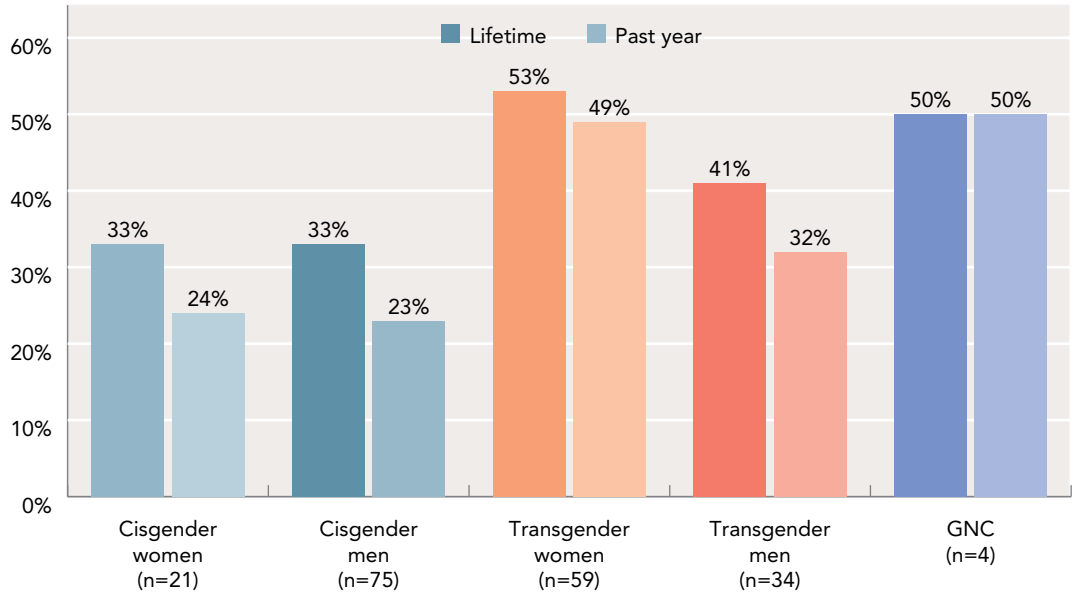


Figure 13 shows that gender minority participants experienced significantly higher levels of physical violence than cisgender (sexual minority) participants (see also Table 20). About half of transgender women and gender non-conforming people had experienced physical violence in the past year.

FIGURE 13: Physical violence, by gender identity



The Demographic and Health Survey (National Statistical Office (NSO) [Malawi] and ICF, 2017) gives us data on physical violence from the general population. The survey found that 34% of women have experienced physical violence since age 15. This suggests that the physical violence experienced by the cisgender, sexual minority participants of our study is similar to the physical violence experienced by women in the general population. Physical violence experienced by gender minority participants (transgender women, transgender men and gender non-conforming people) however, is significantly higher than among women in the general population: for example, 53% among transgender women in our study, compared to 34% among women in the general population.

The violence levels experienced by transgender women in our study (53%) are similar to another recent study from Malawi, where 50% of transgender participants reported experiences of physical violence (Umar et al., 2018). These findings are higher than what we know from other 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 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—gender minority people in Malawi 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 are much higher than in the US.

Figure 13 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 (50% among gender non-conforming people, 53% among transgender women, compared to 41% 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 people in Malawi are very high, we caution against only using sexual minority or gender minority categories to determine who is at risk for violence. These categories alone do not adequately demonstrate the diversity of non-conforming gender expression that puts people at risk for violence by 'revealing' one's (assumed) sexual orientation or gender identity.

Perpetrators of violence

We asked participants who the perpetrators of violence were. Table 12 shows the details of this analysis. There are a few important observations, which we will describe in the following sections.

TABLE 12: Perpetrators of lifetime sexual and physical violence

	Overall sample (n=197)		**Gender minority participants (n=100)**		
	n	%	n	%	p
Sexual violence					
Intimate partner					
	(n=192)		(n=96)		
	64	33.33	39	40.62	0.036*
Someone known (not intimate partner)					
	(n=189)		(n=93)		
	49	25.93	26	27.96	0.559
Stranger					
	(n=187)		(n=91)		
	42	22.46	22	24.18	0.611
Someone lived with (intimate partner or other)					
	(n=189)		(n=94)		
	34	17.99	21	22.34	0.130

	Overall sample (n=197)		Gender minority participants (n=100)		
	n	%	n	%	p
Physical violence					
Intimate partner					
	(n=193)		(n=97)		
	53	27.46	37	38.14	0.001*
Someone known (not intimate partner)					
	(n=192)		(n=96)		
	44	22.92	26	27.08	0.182
Stranger					
	(n=188)		(n=92)		
	45	23.94	25	27.17	0.328
Someone lived with (intimate partner or other)					
	(n=190)		(n=94)		
	29	15.26	19	20.21	0.065

Participant felt any lifetime sexual or physical violence was linked to being LGBTI					
	(n=98)		(n=47)		
Yes	59	60.20	40	70.18	0.017*

*Chi square/Fisher's exact test p-value significant, at p<0.05

Intimate partner violence

First, we found high levels of intimate partner violence among participants. One in three participants (33%) said that they had been sexually assaulted by an intimate partner of any gender. Among gay participants, more than one in three (37%) had been sexually assaulted by an intimate partner; among bisexual participants, it was one in four (26%; see also Table 16 and Table 17). Among gender minority participants, 41% had been sexually assaulted by an intimate partner (compared to 26% of cisgender participants).

One in four participants had been physically assaulted by an intimate partner (27%). This number was significantly higher among gender minority participants (38%) compared to cisgender participants (17%).

Our study confirm findings from a representative national survey in the United States that found that levels of sexual and physical intimate partner violence are high among sexual minority men and women (Walters, Chen and Breiding, 2013). Compared to the general population in Malawi, it seems that intimate partner violence was more prevalent in our sample of sexual and gender minority people: a recent analysis of the 2004 Demographic and Health Survey (Mandal and Hindin, 2013) showed that 18 % of women in the general population had experienced physical violence by an intimate partner (compared to 27% of participants in our study; and 38% of gender minority participants in our study).

Stranger violence

Second, we found that the levels of sexual and physical violence perpetrated by strangers were high: almost a quarter of participants had been sexually or physically assaulted by a stranger (22% and 24% respectively). These numbers were slightly higher among gender minority participants, although the difference to cisgender participants was not significant.

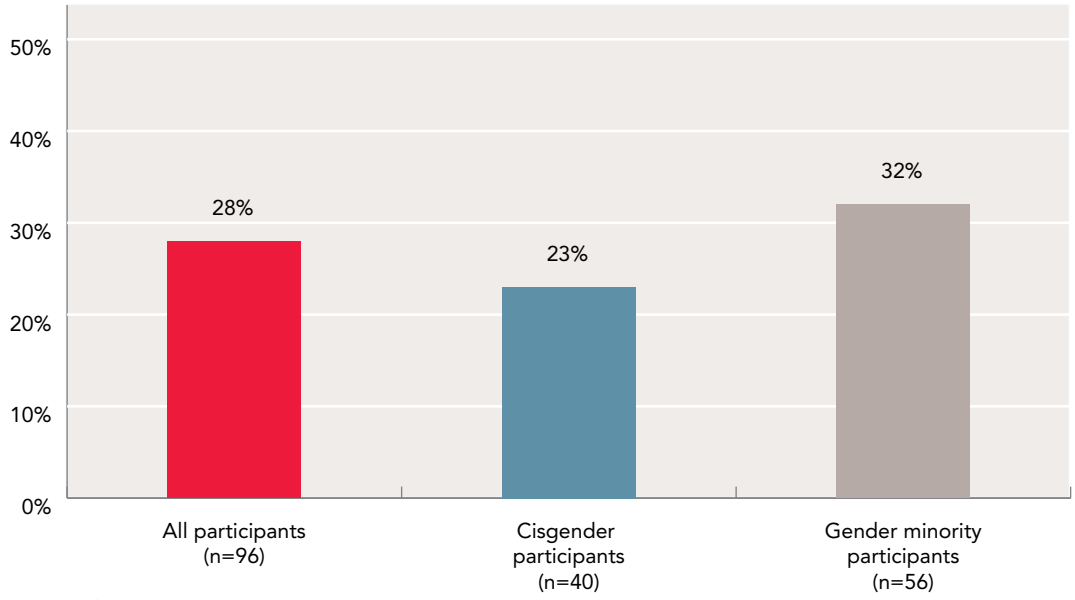
SOGIE-motivated violence

Third, almost two thirds of participants (60%), felt that the violence they experienced was linked to their sexual orientation and gender identity. Among gender minority participants, this was significantly higher: 70% of gender minority participants felt that violence was linked to their sexual orientation or gender identity, compared to 46% of cisgender 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. More than a quarter of all participants who had experienced violence showed signs of post-traumatic stress (Figure 14).

FIGURE 14: 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 13). Less than one in five participants (18%) had reported to the police. Less than a third of participants had sought medical care (29%). Of those who had reported to police, or sought medical care, two

thirds said they had been treated with less courtesy than others because of their sexual orientation and/or gender identity.

These findings confirm findings from a recent study among transgender people in Malawi. In Umar et al.'s (2018) study, four out of five transgender people did not report violence to the police, and of those who did, most said they were not treated with respect. This is similar to our findings.

TABLE 13: Reporting violence

	Overall sample (n=197)		Gender minority participants (n=100)		
Experienced violence in previous year	**(n=77)**		**(n=49)**		
Sought medical care	(n=72)		(n=45)		
	21	29.17	16	35.56	0.124
Reported to police	(n=72)		(n=45)		
	13	18.06	10	22.22	0.235
Felt treated with less courtesy for being LGBTI	(n=23)		(n=18)		0.868
Categorical					
Never	7	30.43	6	33.33	
Rarely	5	21.74	4	22.22	
Sometimes	6	26.09	4	22.22	
Often	5	21.74	4	22.22	
Binary					0.567
No (Never)	7	30.43	6	33.33	
Yes (Rarely/Sometimes/Often)	16	69.57	12	66.67	

*Chi square/Fisher's exact test p-value significant, at $p<0.05$

Mental health outcomes

Mental health outcomes in the overall sample

Table 14 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 gender minority participants. Each of these health outcomes are described in further detail in the subsections below.

TABLE 14: Overall mental health outcomes

	Overall sample (n=197)		Gender minority[6] participants (n=100)		
	n	%	n	%	p
Depression (CES-D-10)	(n=195)		(n=99)		0.480
Classified as not depressed	102	52.31	54	54.55	
Classified as depressed	93	47.69	45	45.45	
Anxiety (GAD-7)	(n=177)		(n=90)		
Categorical					0.067
No signs of anxiety	78	44.07	37	41.11	
Signs of mild anxiety	58	32.77	37	41.11	
Signs of moderate anxiety	26	14.69	10	11.11	
Signs of severe anxiety	15	8.47	6	6.67	
Binary					0.076
No/mild anxiety	136	76.84	74	82.22	
Moderate/severe anxiety	41	23.16	16	17.78	
Suicidality					
Suicidal ideation, lifetime	(n=193)		(n=97)		
	40	20.73	21	21.65	0.778
Suicidal attempts, lifetime	(n=190)		(n=95)		
	29	15.26	16	16.84	0.566
Suicidal ideation, past year	(n=186)		(n=91)		
	26	13.98	12	13.19	0.738
Suicidal attempts, past year	(n=187)		(n=92)		
	20	10.70	11	11.96	0.600
Alcohol use	(n=183)		(n=93)		
Categorical					0.223
No alcohol use	78	42.62	35	37.63	
Some alcohol use	10	5.46	8	8.60	
Hazardous use	29	15.85	15	16.13	
Harmful use	21	11.48	13	13.98	
Alcohol dependence	45	24.59	22	23.66	

6 Gender minority refers to all participants who were transgender, gender non-conforming or 'other' gender identities

	Overall sample (n=197)		Gender minority[6] participants (n=100)		
	n	%	n	%	p
Binary					0.559
No/some alcohol use	88	48.09	43	46.24	
Hazard/Harm/ dependence	95	51.91	50	53.76	

Drug use	(n=188)		(n=93)		
Categorical					0.272
No drug use	168	89.36	80	86.02	
Some drug use	2	1.60	3	3.23	
Harmful drug use	14	7.45	8	8.60	
Drug dependence	3	1.60	2	2.15	
Binary					0.432
No/some drug use	171	90.96	83	89.25	
Harmful use/ dependence	17	9.04	10	10.75	

Tobacco use	(n=187)		(n=92)		0.642
Doesn't smoke at all	141	75.40	68	73.91	
Smoke some days	28	14.97	16	17.39	
Smoke everyday	18	9.63	8	8.70	

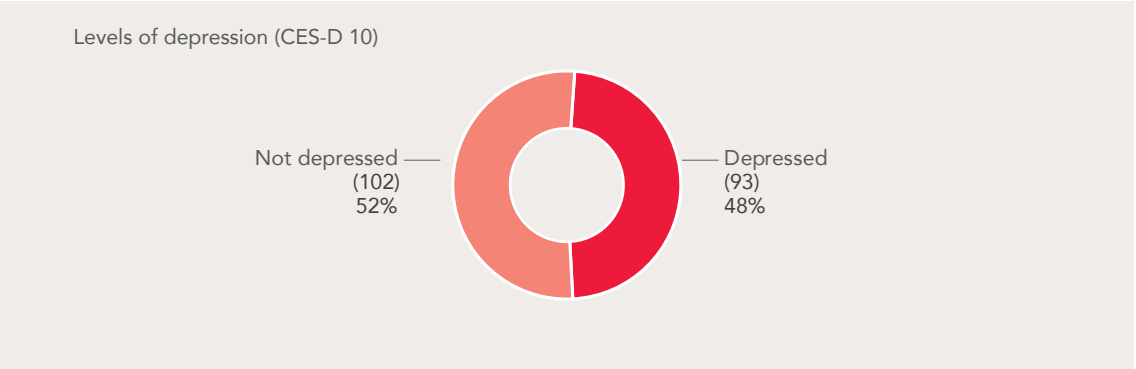
While there is very limited data on the levels of mental health and well-being among the general population in Malawi (for example, the DHS 2014 survey did not survey for any mental health indicators), our findings show that the levels of depression, anxiety and substance use in our sample of sexual and gender minority participants may be higher than among Malawi's general population.

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 with the CES-D 10. In order to receive a definitive diagnosis of clinical depression, an individual needs to see a healthcare provider.

Based on the CES-D 10, almost half of our participants (48%) were classified as currently depressed (Figure 15).

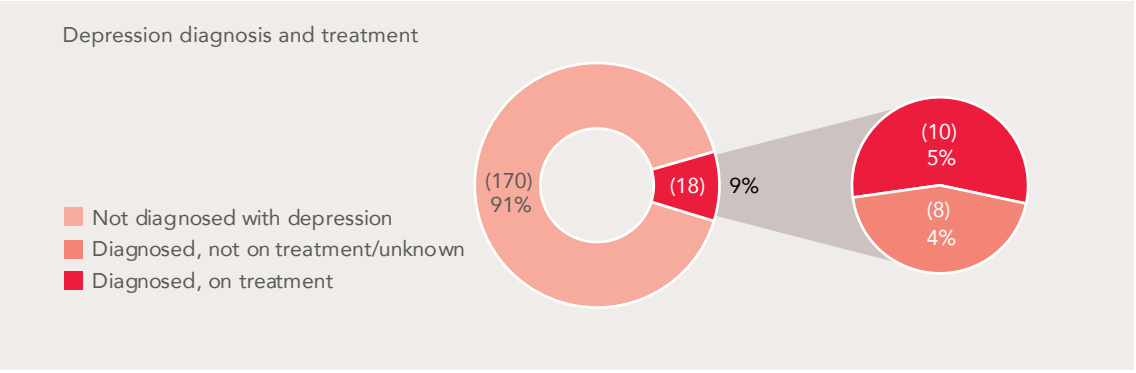
FIGURE 15: Depression, overall sample



Research with the broader Malawian population on mental health conditions such as depression is limited. The World Health Organisation recently estimated the prevalence of depressive disorders in Malawi to be 4.1% (World Health Organization, 2017). Although research suggests Malawian adolescent may have high levels of depression (Kim *et al.*, 2015; Teivaanmäki *et al.*, 2018), one other study also suggested that depression in adults may increase as they age (Kohler *et al.*, 2017). However, these studies all used different measurements for depression, and none used the CES-D 10, which we used for the research in this report. This makes it difficult to understand how our findings might compare with cisgender, heterosexual Malawians. However, our finding that 48% of participants show signs of depression is certainly high compared to the WHO's estimate of 4%. This suggests that sexual and gender minority Malawians may be at particular risk for depression and need access to mental healthcare.

Despite the fact that almost half of all participants showed signs of depression, only one in ten participants (9%) said that they had previously been diagnosed with depression (Figure 16). Of those, 56% were receiving treatment at the time of filling out the survey. When we looked at this in comparison to the participants' CES-D scores, 86% 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 16: Depression diagnosis and treatment



Signs of depression were high among participants of all sexual orientations in our study (Figure 17, see also Table 15, Table 16 and Table 17) with the highest being among lesbian participants (56%)

and the lowest among bisexual people (who were mostly men; 39%). Both cisgender (but sexual minority) and gender minority participants showed high levels of signs of depression (Figure 18, see also Table 20). In our sample, cisgender women had the highest level, at 57%.

FIGURE 17: Depression, by sexual orientation

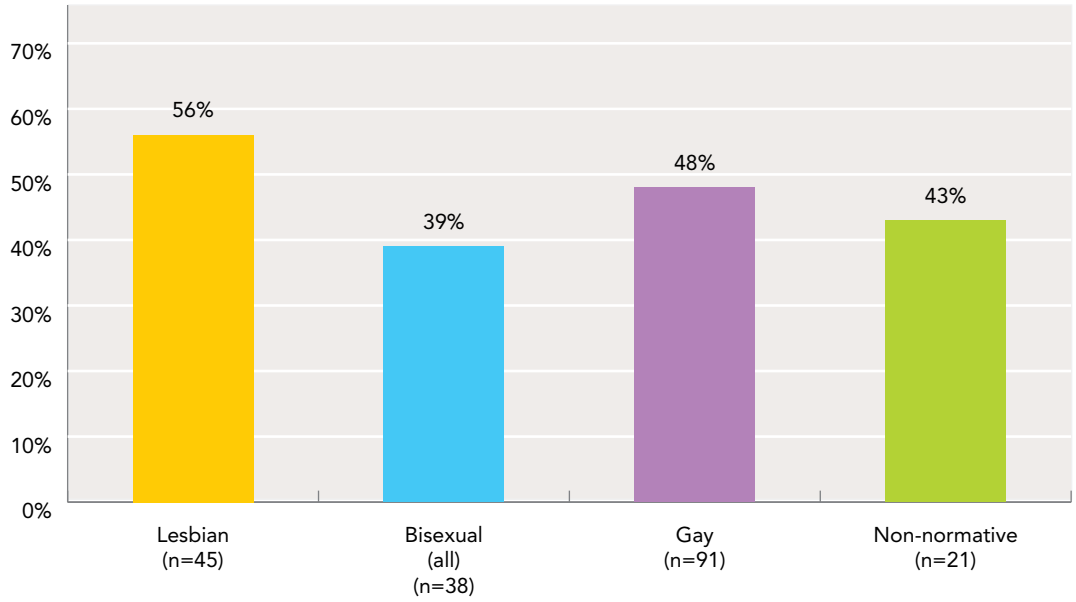
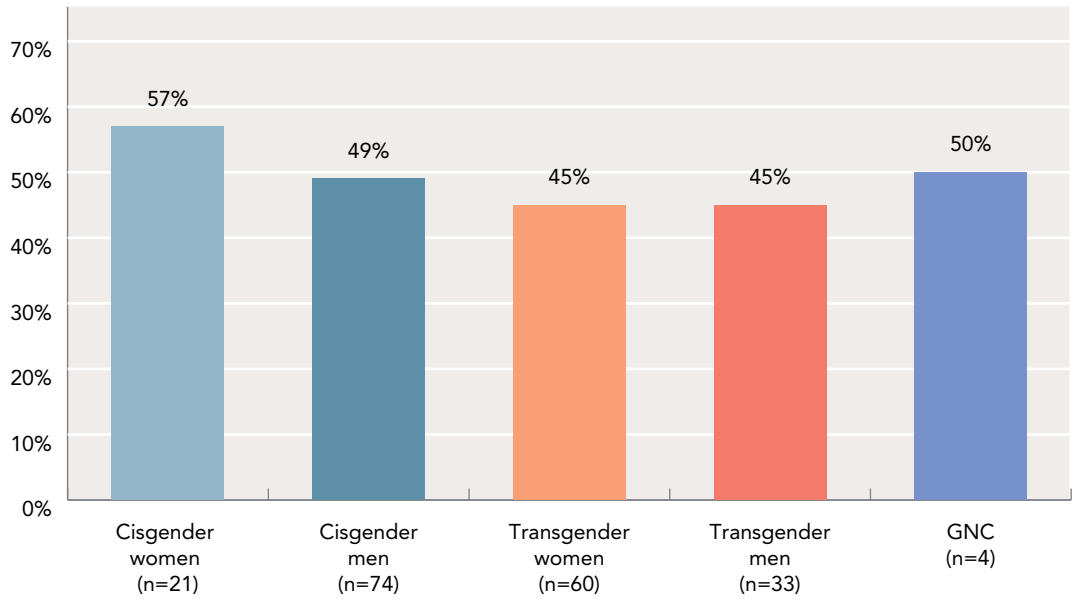


FIGURE 18: Depression, by gender identity

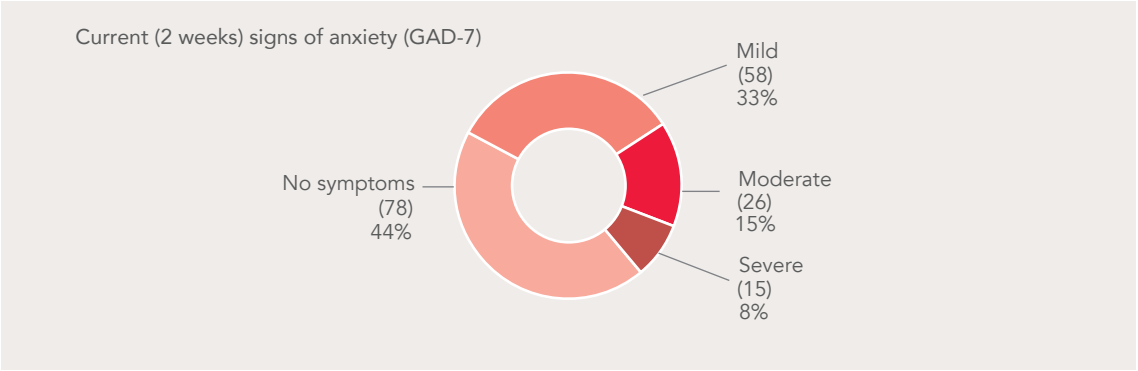


Anxiety

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

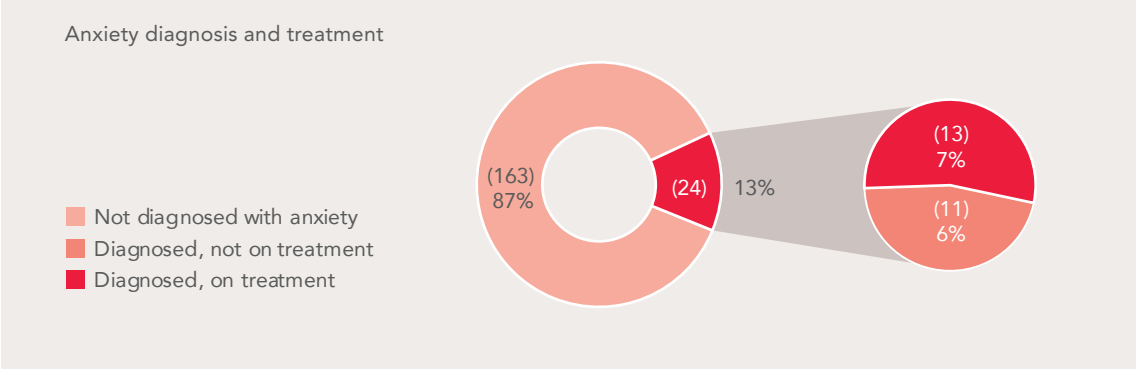
participants, but an assessment of current symptoms. According to the anxiety scores, almost a quarter of participants (23%) had signs of moderate or severe anxiety in the last two weeks, which would typically indicate needing further evaluation by a medical professional (see Figure 19). Eight per cent of participants reported signs of severe anxiety.

FIGURE 19: Signs of anxiety, overall sample



We also asked participants if they had ever been diagnosed with anxiety. Overall, 13% of participants said that they had previously been diagnosed by a healthcare worker with clinical anxiety. About half of participants who said they had been diagnosed were receiving treatment at the time of filling out the survey (Figure 20). Most of participants with symptoms of moderate or severe anxiety had never been told by a doctor that they have clinical anxiety (83%). This suggests that sexual and gender minority Malawians with severe anxiety symptoms (and possibly anxiety disorders) are not accessing the healthcare that they need.

FIGURE 20: Anxiety diagnosis and treatment

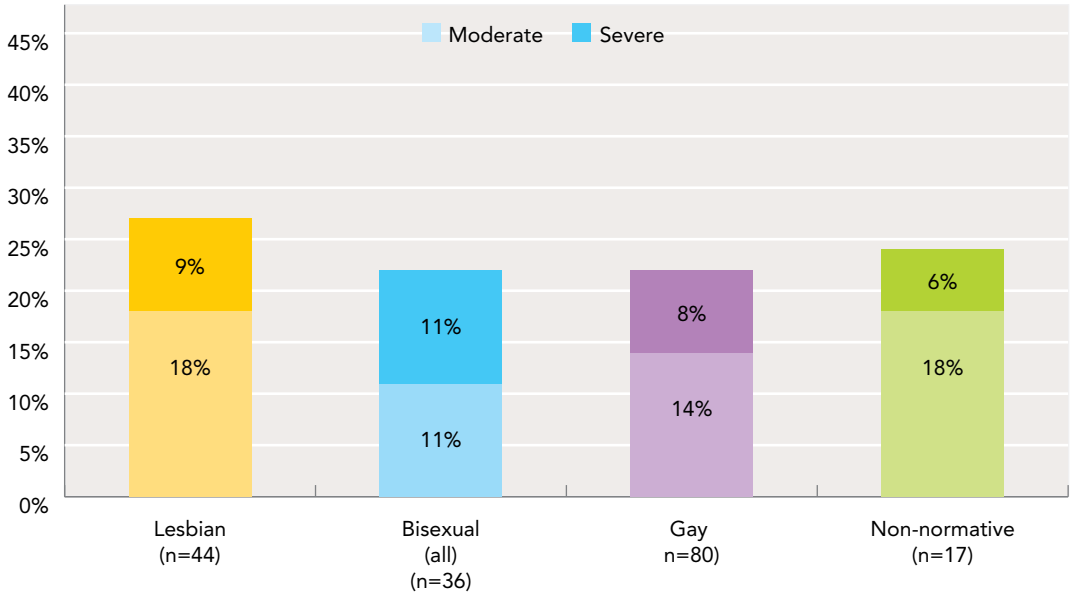


As with depression, the WHO estimate of anxiety disorders at 3% among the general population in Malawi (World Health Organization, 2017) was much lower than our findings of 23% among sexual and gender minority Malawians. Another general population study, with adult Malawians over the age of 45, showed relatively low levels of moderate and severe anxiety overall (approximately 2% in total), although the authors argue that the GAD-7 may underestimate anxiety because there is low public awareness about mental health concerns in Malawi (Kohler *et al.*, 2017). Compared to this study, the sexual and gender minority participants in our study had more than ten times higher levels of moderate and severe anxiety (23% in total). If Kohler et al.'s (2017) argument that

the GAD-7 may underestimate anxiety in Malawi is correct, then the scores in our study would also be underestimating prevalence. This means that anxiety may be even more widespread among sexual and gender minority Malawians than our findings suggest.

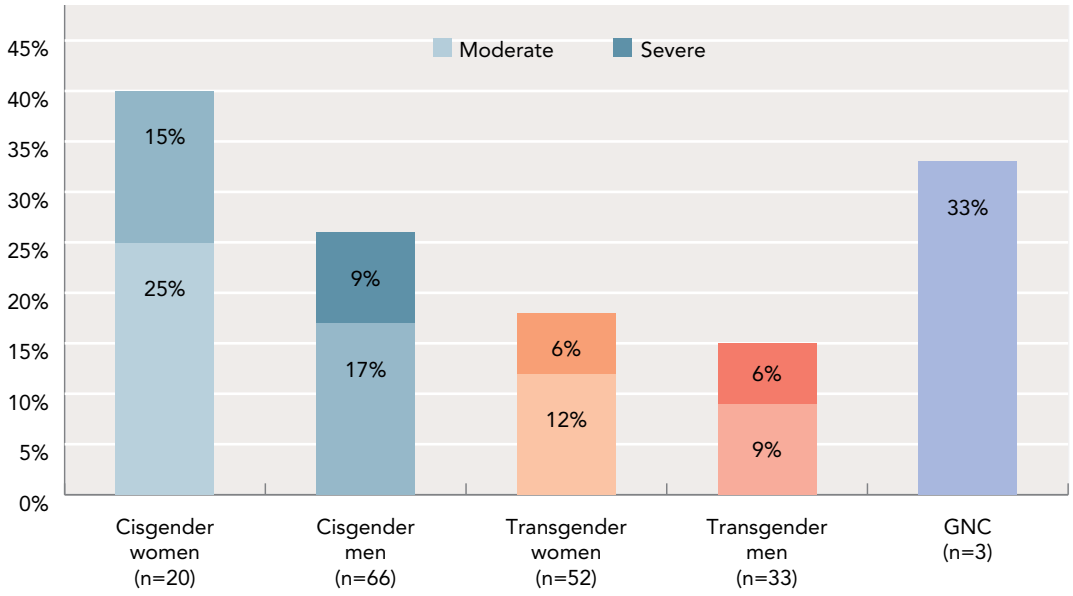
We did not observe major differences in anxiety levels by sexual orientation. Like with depression, moderate and severe anxiety levels were highest among lesbian participants, where one in four participants showed such signs (27%; Figure 21, see also Table 15, Table 16 and Table 17).

FIGURE 21: Anxiety levels, by sexual orientation



When examining differences in anxiety by gender identity, cisgender participants appeared to have more moderate and severe anxiety than gender minority participants, although this difference was not statistically significant (Figure 22, see also Table 20). Cisgender women had the highest levels of anxiety symptoms, with 40% showing signs of moderate and severe anxiety—much higher than the transgender women or men in our sample (18% and 15%, respectively).

FIGURE 22: Anxiety levels, by gender identity

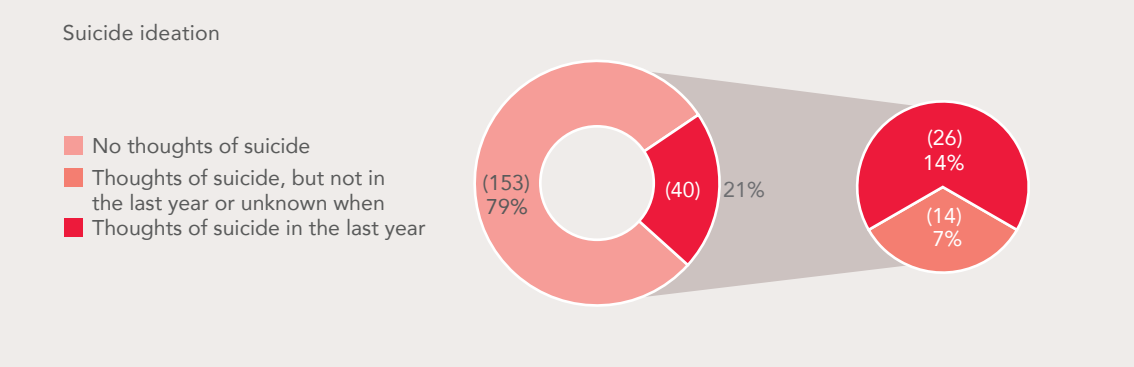


Suicidality

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 14).

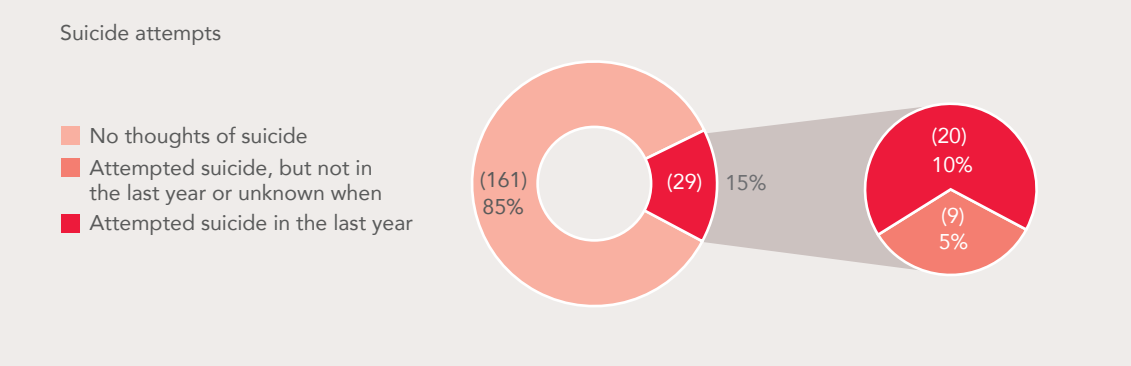
Figure 23 shows how many participants had ever thought about ending their life. One in five (21%) participants had thought about ending their life at least once at some point in their life. Of those who had thought about it, two thirds (65%) had thought about ending their life in the previous year. Of all participants, 14% had thought about ending their life in the past year.

FIGURE 23: Suicidal ideation



One in seven participants (15%) had tried to end their life at some point in their lives. One in ten participants (10%) had tried to end their life in the past year (Figure 24).

FIGURE 24: Suicide attempts, lifetime and previous year

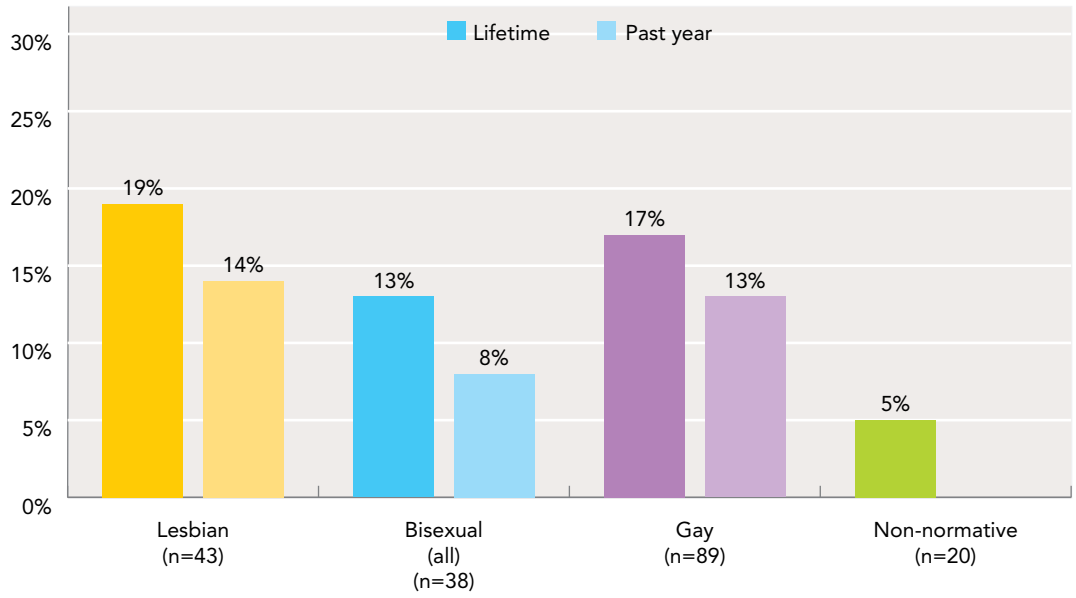


A systematic review conducted by King and colleagues (2008) highlights the higher risk of suicidality that sexual minority people experience, though only studies from North America, Europe and Australasia were eligible to be included (further highlighting the need for research on the African continent). 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). We looked at studies on suicidality in the Malawian general population to see if a similar trend can be seen in Malawi. We assumed that the general population would be mostly cisgender and heterosexual, and thus compare as a non-sexual and gender minority population living in

the same context. We could not find any studies on suicidality in adults, but only studies on suicidality in adolescents. Internationally, studies show that suicide attempts are highest during adolescence and young adulthood (Nock *et al.*, 2008), which is important to keep in mind during the comparison of our adult data with data from adolescent populations. The first study among adolescents attending school in Malawi showed that 13% had thought of suicide in the past year, and 13% had attempted suicide in the past year (Shaikh *et al.*, 2016). These are numbers similar to suicide ideation and attempt in our study of adult sexual and gender minorities. Another study, which looked at levels of suicide among school-going adolescents in Malawi between 2003 and 2014 showed that 12% of female and 9% of male adolescents had thought of suicide (McKinnon *et al.*, 2016). The numbers of adult sexual and gender minorities in our study are higher compared to these findings, despite the fact that suicidal ideation and attempt are usually highest among adolescents (Nock *et al.*, 2008).

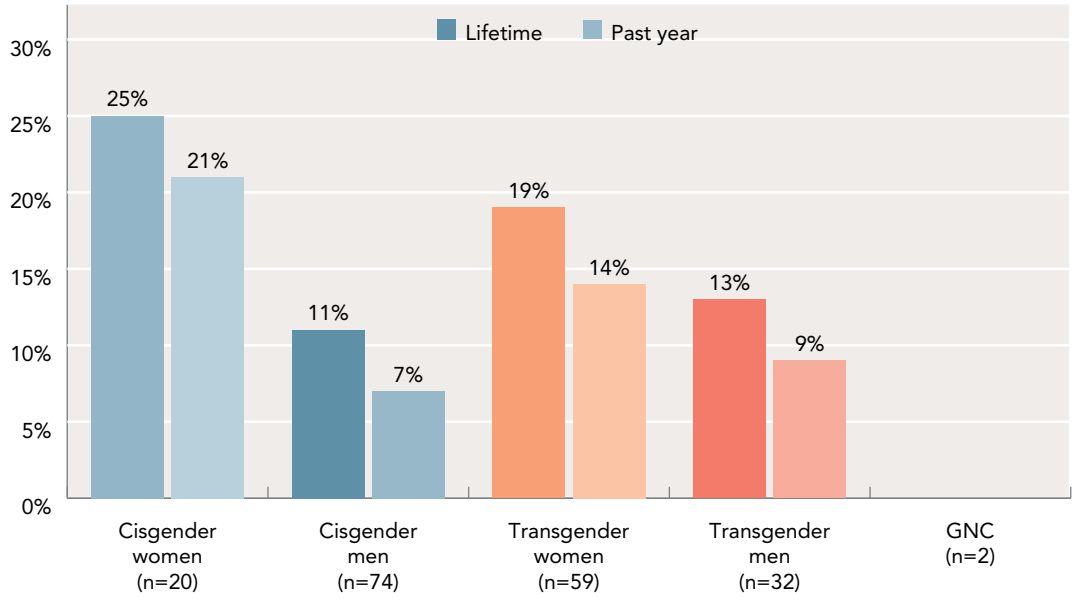
When looking at suicide attempts by participants of different sexual orientations, lesbian participants had the highest level of attempted suicide (one in five attempted to end their life at some point; one in seven in the past year; see Figure 25 and also Table 15, Table 16 and Table 17). Gay participants had a 17% lifetime prevalence (one in seven) and 13% past year prevalence (one in eight) of suicide attempts.

FIGURE 25: Suicide attempts, by sexual orientation



Cisgender sexual minority women (lesbian and bisexual women) had the highest levels of suicide attempts: one in four (25%) had attempted suicide at some point in her life, and one in five (21%) in the past year (Figure 26, see also Table 20). Among transgender women, it was one in four in her life (19%) and one in seven (14%) in the past year.

FIGURE 26: Suicide attempts, by gender identity



Our findings about suicidal ideation and suicide attempts among transgender people are higher than findings by Umar et al. (2018) about suicidal ideation and attempt among transgender people in Malawi: in Umar et al.'s study, 9% of transgender participants had attempted suicide in the previous year. Our findings suggest that even more transgender people, especially transgender women, might have suicidal ideation and attempt suicide.

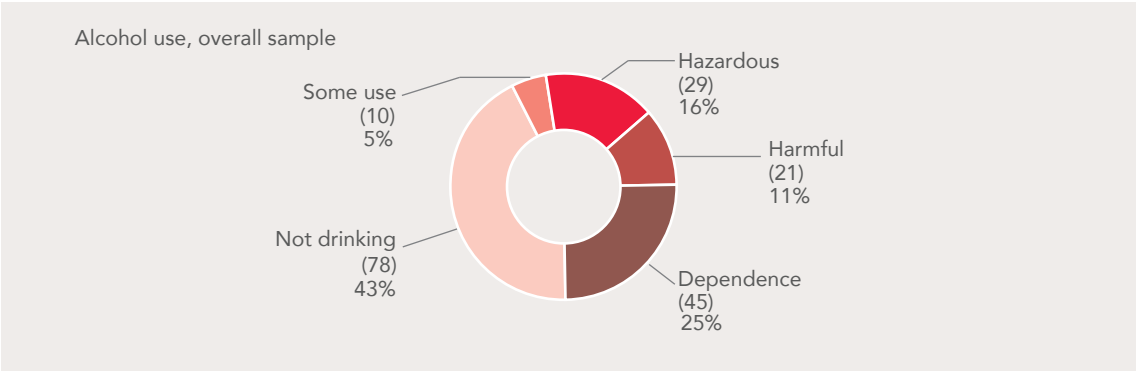
Examining the number of completed suicides among sexual and gender minority people in Malawi was beyond the scope of this research and limits the interpretation of our findings.

In summary, our findings show that suicide ideation and attempts are high among sexual and gender minority people in Malawi and are especially high among cisgender lesbian and bisexual women. This might be linked to the high levels of depression that we found among this group of participants.

Alcohol use

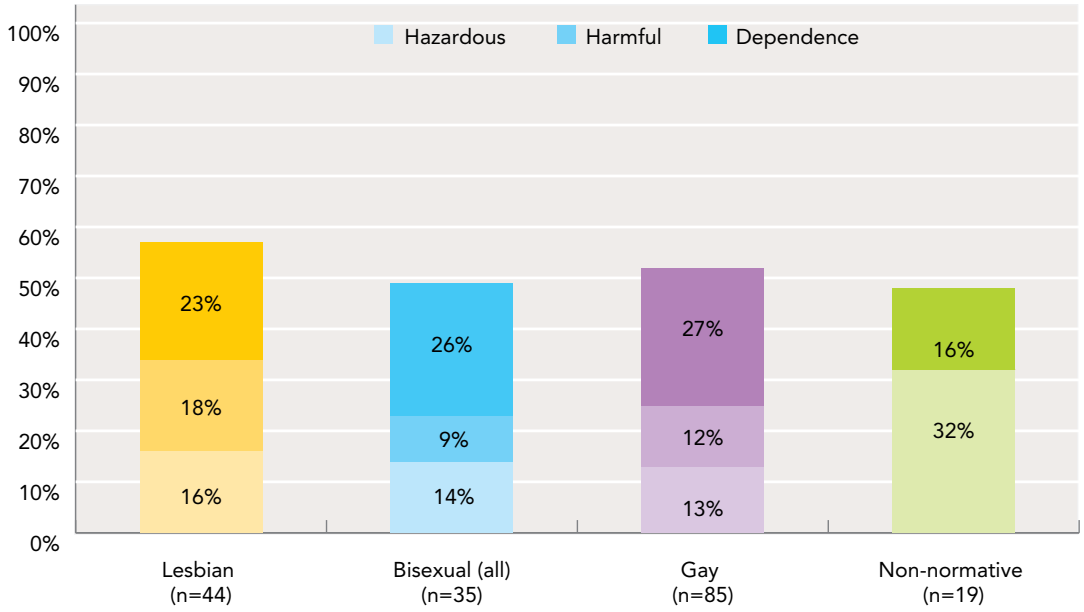
We used the 10-item AUDIT instrument to ask participants about how much alcohol they consume, and the impacts of their drinking on their lives. Figure 27 shows the levels of alcohol use in the overall sample. Forty-three percent of participants said they never drink alcohol. An additional 5% drank some alcohol without health risks. However, more than half of our participants drank alcohol at a level that could have risks for their health: one quarter (27%) showed signs of hazardous or harmful alcohol use, and another quarter (25%) showed signs of alcohol dependence.

Figure 27: Alcohol use, overall sample



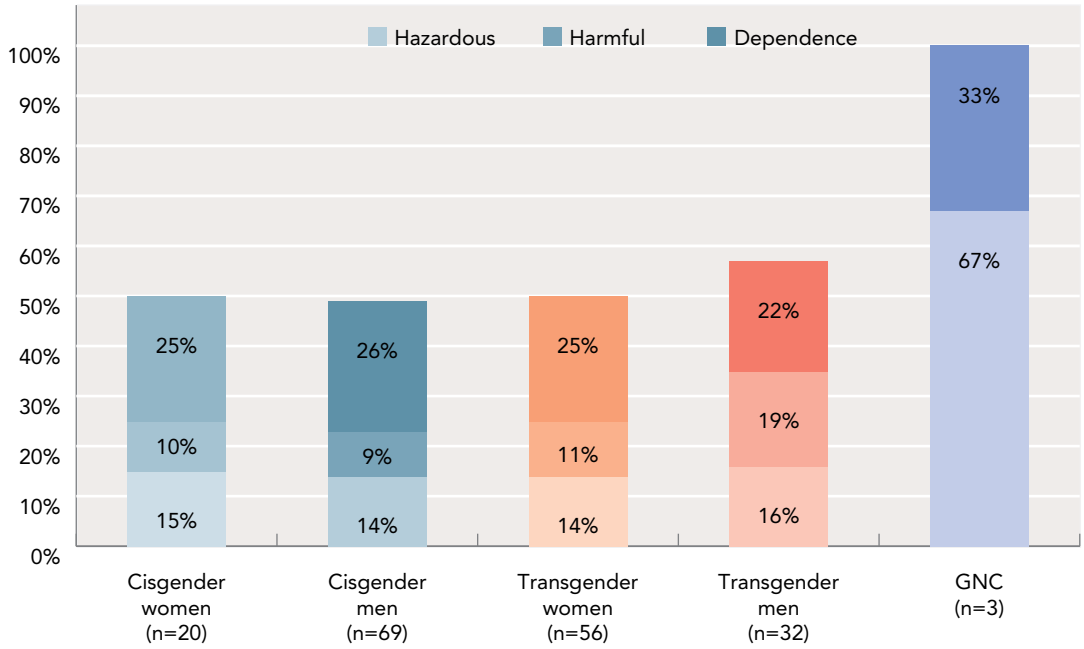
When looking at alcohol use by sexual orientation, we did not observe major differences in drinking patterns (Figure 28, see also Table 15, Table 16 and Table 17). Lesbian participants had the highest level of hazardous, harmful or dependent drinking at 57%.

FIGURE 28: Alcohol use, by sexual orientation



When looking at alcohol use by gender identity (Figure 29, see also Table 20), we found that cisgender and gender minority participants had similar levels of hazardous/harmful/dependent drinking. Transgender men had the highest level in the sample, at 57%.

FIGURE 29: Alcohol use, by gender identity



We found little data measuring the severity of drinking among the general population in Malawi. The World Health Organisation reported that "heavy episodic drinking" is more common among Malawian men (15%) than women (1%) (*Global alcohol report: Malawi*, 2014). In our study, cisgender and transgender men and women had similar drinking experiences, with 52% of participants drinking in hazardous, harmful or dependent ways. While comparisons are difficult to make because of the lack of general population data, our findings suggest that drinking at levels that pose health risks might be higher among Malawian sexual and gender minority people, compared to the general population.

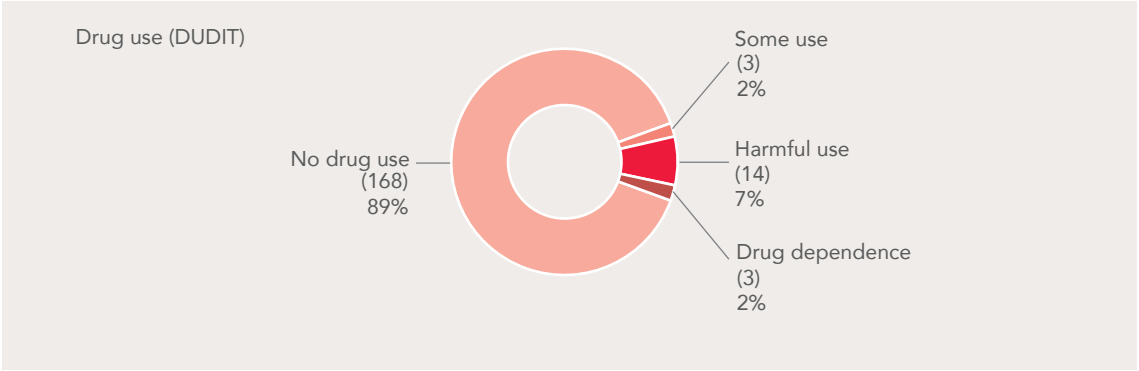
At present there is a lack of data that is disaggregated by sexual orientation and gender identity in research on alcohol use (Flentje, Bacca and Cochran, 2015). International evidence on alcohol use among sexual minority people is somewhat mixed, although a 2008 systematic review shows that sexual minority 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 study did not find significant differences in drinking behaviour between cisgender and transgender participants – but it is important to keep in mind that all our cisgender participants were also sexual minorities, and not heterosexual.

Our findings confirm high levels of hazardous, harmful and dependent drinking among sexual and gender minority people in Malawi, as studies from other settings have also found. In comparison to other data from Malawi where sexual orientation and gender identity were not reported, our sample of sexual and gender minority people seems to have much higher levels of drinking alcohol in an unhealthy or harmful manner.

Drug use

To measure levels of drug use among our sexual and gender minority sample, we used the DUDIT instrument (Figure 30). The majority of participants reported no drug use (89%), however, nearly one in ten participants (9%) reported harmful levels of drug use, including drug dependence.

FIGURE 30: Drug use, overal sample



Participants had similar levels of drug use by sexual orientation and gender identity (Figure 31 and Figure 32, see also Table 15, Table 16, Table 17 and Table 20). Gay participants, as well as transgender men, had the highest levels of harmful or dependent drug use (12% for each).

FIGURE 31: Drug use, by sexual orientation

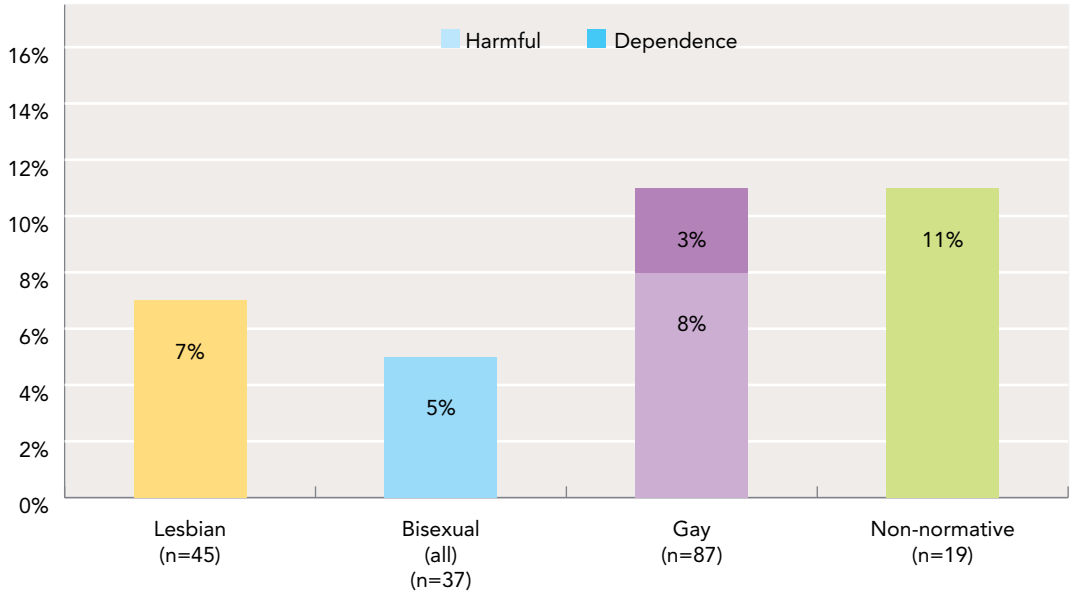
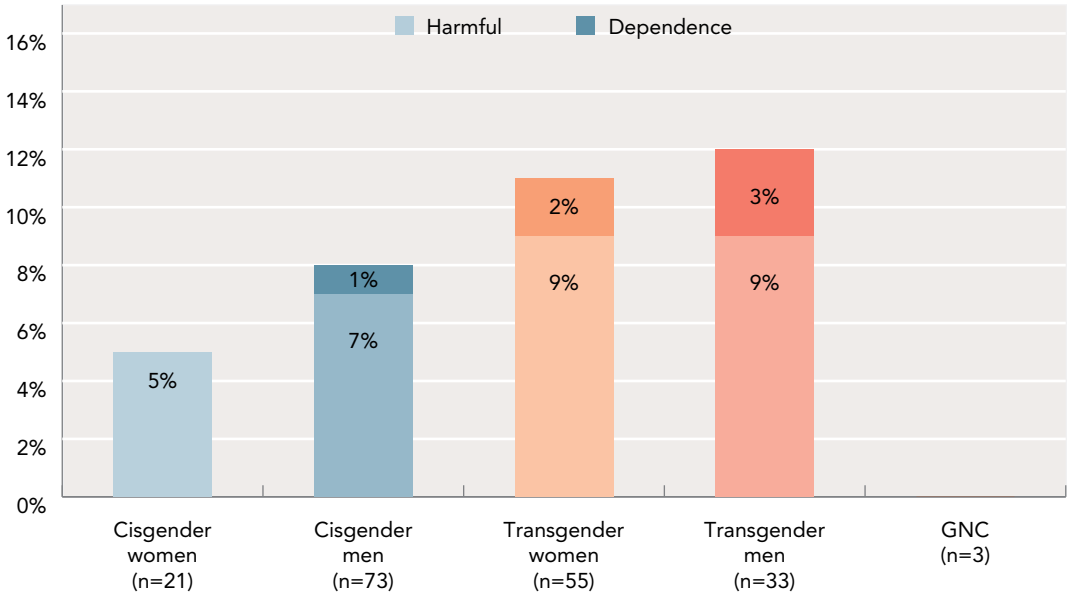


FIGURE 32: Drug use, by gender identity



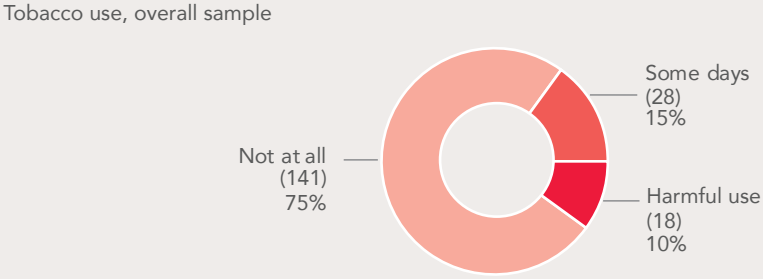
Research from other countries suggests that harmful drug use is more common among sexual and gender minority people than cisgender, heterosexual ones (Marshal *et al.*, 2008). The biggest risk factors for substance use among sexual and gender minorities are victimization, a lack of supportive environments, and psychological stress (Goldbach *et al.*, 2014) – which many of the participants in our study reported.

Regardless of whether the levels of drug use are higher or lower than in the general population, the fact that more than one in ten participants in our study used drugs at a level that was harmful to their health means that Malawian sexual and gender minority people need support and drug use harm reduction programmes that are accessible and affirming of sexual and gender diversity.

Tobacco use

One quarter (25%) of all participants reported that they smoke tobacco. Some smoke every day (10%) and some only on some days (15%) (Figure 33).

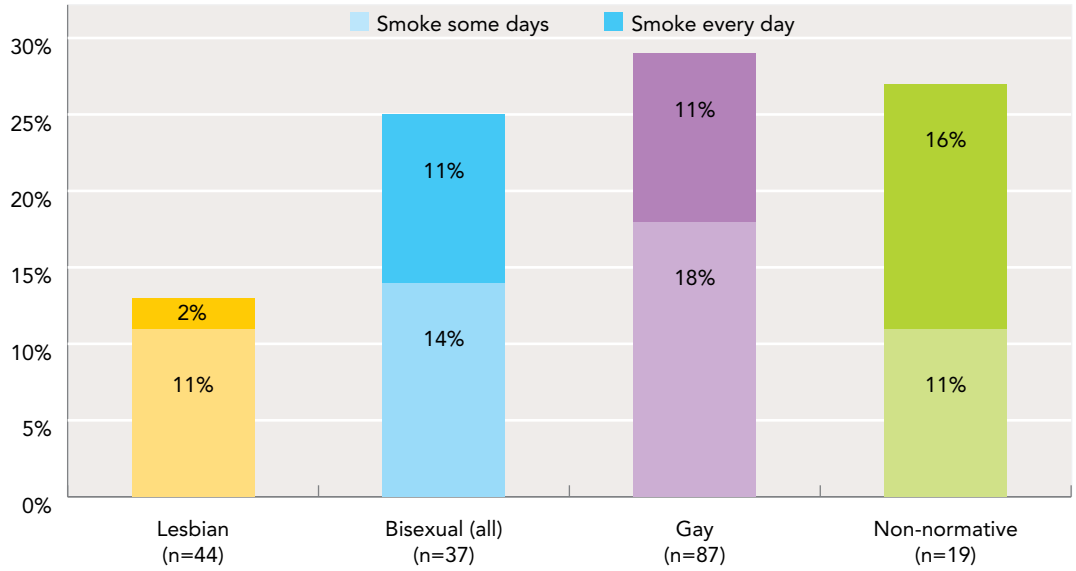
FIGURE 33: Tobacco use, overall sample



Compared to recent prevalence data on smoking among Malawian adults, our findings were fairly high. The most recent Demographic and Health Survey (National Statistical Office (NSO) [Malawi] and ICF, 2017) shows that the use of cigarettes is highly gendered, with 12% of (presumably cisgender, heterosexual) men smoking cigarettes, compared to less than 1% of women. While we see this gendered difference in our data among cisgender participants who are sexual minorities, we also found that overall the levels of cigarette smoking were much higher than among the general population (Figure 35).

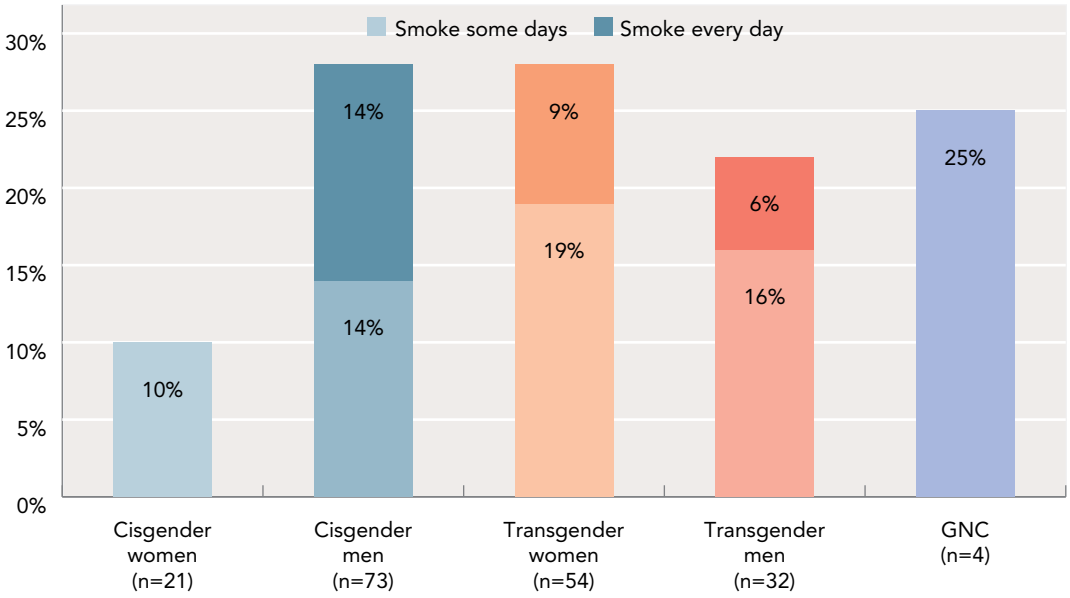
In our sample, 13% of lesbian participants, 25% of bisexual participants and 29% of gay participants reported smoking (Figure 34, see also Table 15, Table 16 and Table 17).

FIGURE 34: Tobacco use, by sexual orientation



When looking at gender identity, the disparity between cisgender women and cisgender men seen in the DHS report (National Statistical Office (NSO) [Malawi] and ICF, 2017) was evident, though the prevalence of smoking was higher overall. Ten percent of cisgender women (as compared to less than 1% in the DHS) and 28% of cisgender men (as compared to 12% in the DHS) reported being smokers (Figure 35, see also Table 20). All gender minority participants had fairly high levels of smoking, with transgender women having the highest prevalence at 28%.

FIGURE 35: Tobacco use, by gender identity



Our findings suggest that tobacco smoking may be more prevalent among sexual and gender minority Malawians than their heterosexual, cisgender counterparts. Our findings were much higher than the prevalence in the recent Malawi DHS (National Statistical Office (NSO) [Malawi] and ICF, 2017). However, older research from Malawi more closely matched our findings among men—data collected from a nationwide, population based study in 2009 found 26% of men and 3% of women smoked tobacco (Msyamboza *et al.*, 2011), as compared to 28% of cisgender gay and bisexual men and 10% of cisgender lesbian and bisexual women in our study.

International data on smoking and sexual and gender minority people is limited. What is available, though mostly from Western countries, suggests 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), which our findings confirm for Malawi. While tobacco use might be seen as rather harmless, its long-term health consequences are severe: the World Health Organization estimates that globally, 12% of deaths among adults who are older than 30 are attributable to tobacco use (World Health Organization, 2012). This is because tobacco increases the risk of cancer, heart disease and lung disease. The high levels of tobacco use among sexual and gender minority people in Malawi also increase their risk for these diseases in the medium to long term.

Experiences of violence, mental health and well-being 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 46 lesbian participants in the sample. Figure 36 shows the gender identities of lesbian participants.

FIGURE 36: Gender identities of lesbian participants

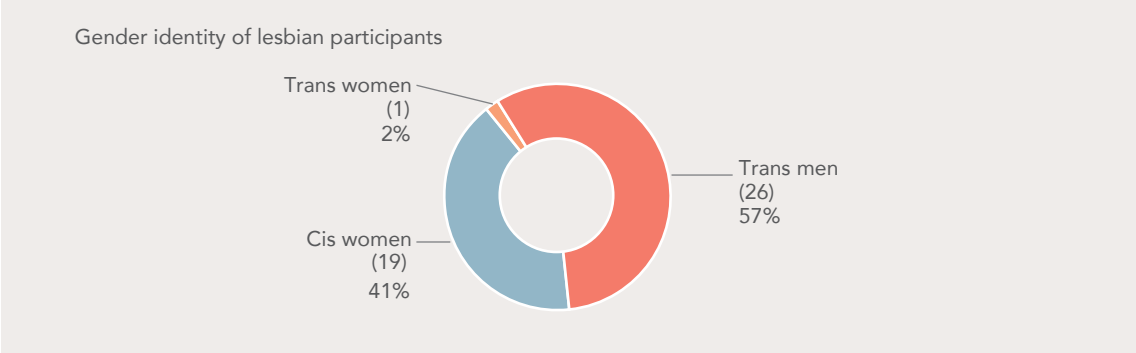


Table 15 shows the study findings for lesbian participants. More than half of lesbian participants were classified as depressed (56%), and one in four (27%) showed signs of anxiety that may require evaluation by a medical professional. One in five (19%) had attempted suicide in their lifetime. More than half (57%) used alcohol in a harmful way and almost 7% used drugs in a harmful way. One in seven (14%) used tobacco. More than half (59%) said that they had been verbally harassed for their sexual orientation or gender identity in the past year. In their lifetime, more than one in three (37%) had experienced physical violence, and the same amount had experienced sexual violence. More than half (27%) had experienced sexual violence by an intimate partner, and almost half (24%) physical violence by an intimate partner.

TABLE 15: Health outcomes and experiences of violence, lesbian participants

	n	%
Depression		
Depressed (based on CES-D 10) (n=45)	25	55.56
Ever been diagnosed with depression (n=42)	5	11.90
Of these, currently treated for depression (n=5)	3	60.00
Anxiety (n=44)		
Categorical		
Participants with no signs of anxiety	16	36.36
Participants with signs of mild anxiety	16	36.36
Participants with signs of moderate anxiety	8	18.18
Participants with signs of severe anxiety	4	9.09

	n	%
Binary		
No/mild anxiety	32	72.73
Moderate/severe anxiety	12	27.27
Ever been diagnosed with anxiety (n=44)	8	18.18
Of these, currently treated for anxiety (n=8)	5	62.50
Suicidality		
Suicidal ideation, lifetime (n=44)	11	25.00
Suicide attempt, lifetime (n=43)	8	18.60
Suicidal ideation, past year (n=43)	7	16.28
Suicide attempt, past year (n=42)	6	14.29
Alcohol use (n=44)		
Categorical		
No alcohol use	16	36.36
Some alcohol use	3	6.82
Hazardous use	7	15.91
Harmful use	8	18.18
Alcohol dependence	10	22.73
Binary		
No/some alcohol use	19	43.18
Hazard/Harm/ dependence	25	56.82
Drug use (n=45)		
Categorical		
No drug use	40	88.89
Some drug use	2	4.44
Harmful drug use	3	6.67
Drug dependence	0	0.00
Binary		
No/some drug use	42	93.33
Harmful use/ dependence	3	6.67

	n	%
Tobacco use (n=44)		
Don't smoke at all	38	86.36
Smoke some days	5	11.36
Smoke everyday	1	2.27
Verbal harassment for being LGBTI (n=46)		
In lifetime	31	67.39
Past year (n=43)	24	55.81
Sexual violence		
In lifetime (n=46)	17	36.96
Past year (n=46)	12	26.09
Physical violence		
In lifetime (n=46)	17	36.96
Past year (n=46)	15	32.61
Intimate partner, lifetime		
Sexual violence (n=45)	12	26.67
Physical violence (n=46)	11	23.91

Experiences of violence, mental health and well-being of gay participants

Gay participants include all cisgender and transgender men who self-identified as gay, 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' health). There were 92 gay people in the sample. Figure 37 shows the gender identities of gay participants.

FIGURE 37: Gender identities of gay participants

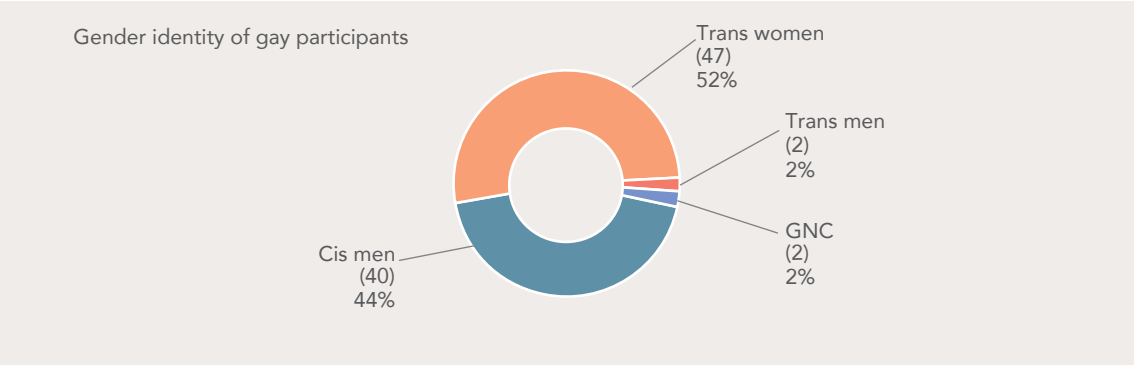


Table 16 shows the study findings for gay participants. Almost half of them were classified as depressed (49%), and one in five (22%) showed signs of moderate or severe anxiety. One in six (17%) had attempted suicide in their lifetime. Half (52%) used alcohol in a harmful way, and one in eight (11%) used drugs in a harmful way. Almost one third (30%) used tobacco. In their lifetime, more than two third (70%) said that they had been verbally harassed for their sexual orientation or gender identity, and more than two in five had experienced physical or sexual violence (42% and 43% respectively). More than a third (37%) had experienced sexual violence by an intimate partner, and one in three (33%) physical violence by an intimate partner.

TABLE 16: Health outcomes and violence experiences, gay participants

	n	%
Depression		
Depressed (based on CES-D 10) (n=91)	44	48.35
Ever been diagnosed with depression (n=88)	8	9.09
Of these, currently treated for depression (n=8)	4	50.00
Anxiety (n=80)		
Categorical		
Participants with no signs of anxiety	38	47.50
Participants with signs of mild anxiety	25	31.25
Participants with signs of moderate anxiety	11	13.75
Participants with signs of severe anxiety	6	7.50

	n	%
Binary		
No/mild anxiety	63	78.75
Moderate/severe anxiety	17	21.25
Ever been diagnosed with anxiety (n=88)	10	11.36
Of these, currently treated for anxiety (n=9)	4	44.44

Suicidality		
Suicidal ideation, lifetime (n=91)	18	19.78
Suicide attempt, lifetime (n=89)	15	16.85
Suicidal ideation, past year (n=85)	10	11.76
Suicide attempt, past year (n=88)	11	12.50

Alcohol use (n=85)		
Categorical		
No alcohol use	36	42.35
Some alcohol use	5	5.88
Hazardous use	11	12.94
Harmful use	10	11.76
Alcohol dependence	23	27.06
Binary		
No/some alcohol use	41	48.24
Hazard/Harm/ dependence	44	51.76

Drug use (n=87)		
Categorical		
No drug use	76	87.36
Some drug use	1	1.15
Harmful drug use	7	8.05
Drug dependence	3	3.45
Binary		
No/some drug use	77	88.51
Harmful use/ dependence	10	11.49

	n	%
Tobacco use (n=87)		
Don't smoke at all	61	70.11
Smoke some days	16	18.39
Smoke everyday	10	11.49
Verbal harassment for being LGBTI		
In lifetime (n=89)	62	69.66
Past year (n=81)	42	51.85
Sexual violence (n=90)		
In lifetime	39	43.33
Past year	35	38.89
Physical violence		
In lifetime (n=91)	38	41.76
Past year (n=91)	33	36.26
Intimate partner, lifetime		
Sexual violence (n=89)	33	37.08
Physical violence (n=89)	29	32.58

Experiences of violence, mental health and well-being of bisexual participants

Bisexual participants include any person who self-identified as bisexual. We provide overall numbers for all bisexual participants, but do not disaggregate for bisexual women and men. This is because the number of bisexual women was too small for a meaningful statistical analysis (see Figure 38). For the same reason, we also do not disaggregate the findings for the one bisexual participant who identified as gender non-conforming. When interpreting the findings of bisexual participants, it is important to keep in mind that the vast majority of bisexual participants were cisgender men.

FIGURE 38: Gender identities of bisexual participants

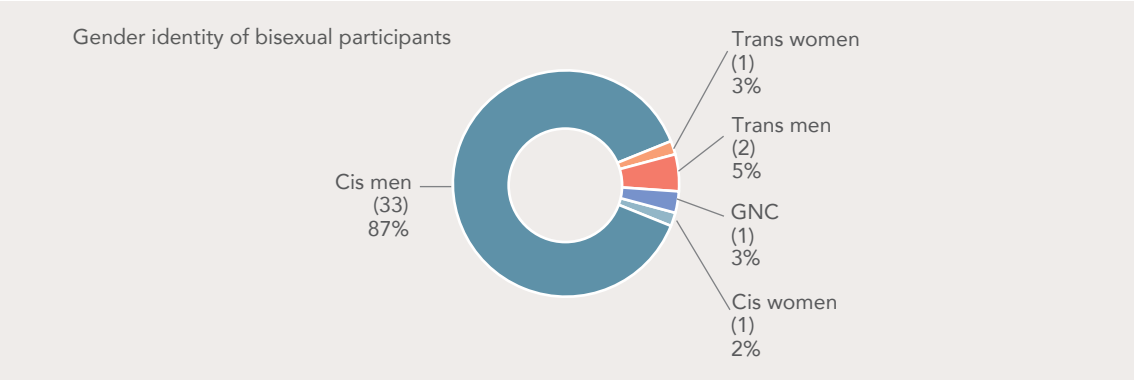


Table 17 shows the study findings for all bisexual participants, bisexual women and bisexual men. Two in five (39%) of all bisexual participants had signs of depression, and one in five (22%) showed signs of anxiety. One in eight (13%) had attempted suicide in their lifetime. Half (49%) used alcohol at a harmful level, and 5% used other drugs in a harmful way. One in four (24%) used tobacco. Over half (55%) said that they had been verbally harassed for their sexual orientation or gender identity, and over a third (39%) had experienced physical violence or sexual violence. One in four (26%) had experienced sexual violence by an intimate partner, and one in five (22%) had experienced physical violence by an intimate partner.

TABLE 17: Health outcomes and violence experiences, bisexual participants

	All bisexual people (n=38)	
	n	%
Depression		
Depressed (based on CES-D 10) (n=38)	15	39.47
Ever been diagnosed with depression (n=38)	2	5.26
Of these, currently treated for depression (n=2)	2	100.00

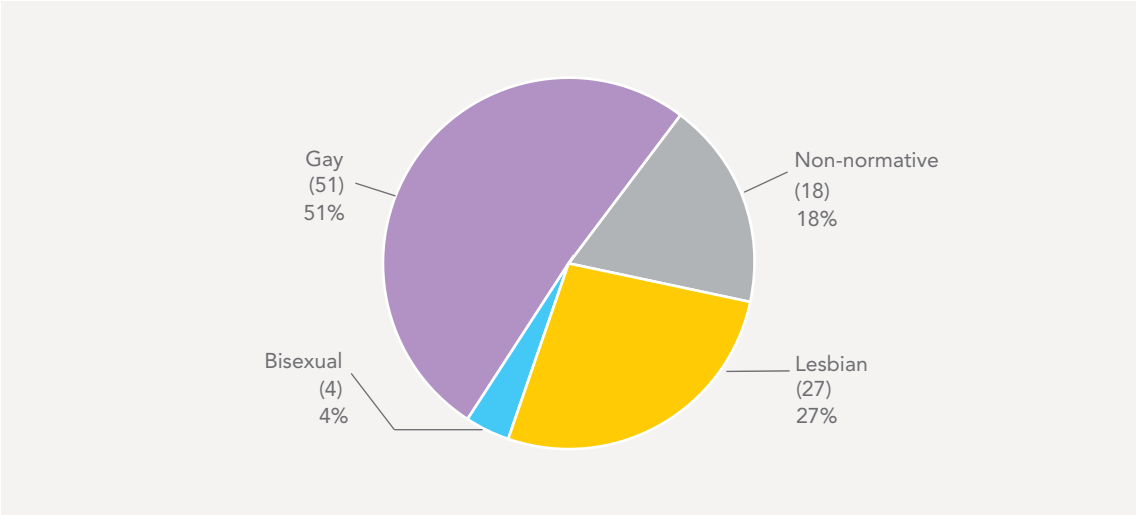
	All bisexual people (n=38)	
	n	%
Anxiety (n=36)		
Categorical		
Participants with no signs of anxiety	17	47.22
Participants with signs of mild anxiety	11	30.56
Participants with signs of moderate anxiety	4	11.11
Participants with signs of severe anxiety	4	11.11
Binary		
No/mild anxiety	28	77.78
Moderate/severe anxiety	8	22.22
Ever been diagnosed with anxiety (n=36)	2	5.56
Of these, currently treated for anxiety (n=2)	2	100.00
Suicidality		
Suicidal ideation, lifetime (n=38)	7	18.42
Suicide attempt, lifetime (n=38)	5	13.16
Suicidal ideation, past year (n=38)	6	15.79
Suicide attempt, past year (n=38)	3	7.89
Alcohol use (n=35)		
Categorical		
No alcohol use	16	45.71
Some alcohol use	2	5.71
Hazardous use	5	14.29
Harmful use	3	8.57
Alcohol dependence	9	25.71
Binary		
No/some alcohol use	18	51.43
Hazard/Harm/ dependence	17	48.57
Drug use (n=37)		
Categorical		
No drug use	35	94.59
Some drug use	0	0.00
Harmful drug use	2	5.41
Drug dependence	0	0.00

	All bisexual people (n=38)	
	n	%
Binary		
No/some drug use	35	94.59
Harmful use/ dependence	2	5.41
Tobacco use (n=37)		
Don't smoke at all	28	75.68
Smoke some days	5	13.51
Smoke everyday	4	10.81
Verbal harassment for being LGBTI		
In lifetime (n=38)	21	55.26
Past year (n=38)	16	42.11
Sexual violence		
In lifetime (n=38)	15	39.47
Past year (n=38)	12	31.58
Physical violence		
In lifetime (n=38)	15	39.47
Past year (n=38)	9	23.68
Intimate partner violence (lifetime)		
Sexual violence (n=38)	10	26.32
Physical violence (n=37)	8	21.62

Experiences of violence, mental health and well-being 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 39 shows the sexual orientations of gender minority participants.

FIGURE 39: Sexual orientations of gender minority participants



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 32), most gender minority participants did not use gender-affirming practices. Similar numbers of those assigned female at birth and those assigned male at birth used binding and tucking (18% and 17%, respectively). Only 5% of gender minority participants used hormones for gender affirmation.

TABLE 18: Gender affirming practices

Gender minority participants (n=100)		
	n	%
Binding (among those assigned female at birth, n=33)	6	18.18
Tucking (among those assigned male at birth, n=65)	11	16.92
Hormones (n=97)	5	5.15

Health outcomes

Table 19 shows the health outcomes for all gender minority people, as well as for transgender women and transgender men. Because only 4 participants identified as gender non-conforming, this number was too small to meaningfully include in the statistical analysis. Gender non-conforming people are therefore included in the overall 'gender minority participant' findings, but the findings are not further disaggregated. Overall, gender minority participants had experienced high levels of violence, and showed high levels of substance use.

Transgender women

Almost half of transgender women (45%) were classified as depressed, and 17% showed signs of moderate or severe anxiety. One in five (19%) had thought of suicide in their lifetime, and the same number had attempted suicide in their lifetime. One in seven (14%) had attempted suicide in the past year. Half (50%) used alcohol at levels that were harmful to their health; and one in four (25%) showed signs of alcohol dependence. One in nine (11%) used drugs at harmful levels, and 28% used tobacco. Three in four (77%) had experienced verbal harassment due to their gender identity, half (50%) had experienced sexual violence, and slightly more than half (53%) had experienced physical violence. Almost half (45%) had experienced sexual violence by an intimate partner, and 44% had experienced physical violence by an intimate partner.

Transgender men

Almost half of transgender men (45%) were classified as depressed, and 15% showed signs of moderate or severe anxiety. One in five (21%) had thought of suicide in their lifetime, and one in eight (13%) had attempted suicide in their lifetime. One in eleven (9%) had attempted suicide in the past year. More than half (56%) used alcohol at levels that were harmful to their health; more than one in five (22%) showed signs of alcohol dependence. 12% used drugs at harmful levels, and 22% used tobacco. Three quarters (79%) had experienced verbal harassment due to their gender identity, one third (35%) had experienced sexual violence, and two in five (41%) had experienced physical violence. One in four (27%) had experienced sexual violence by an intimate partner, and almost one in three (29%) had experienced physical violence by an intimate partner.

TABLE 19: Health outcomes and violence experiences for gender minority participants, transgender women and transgender men

	All gender minority people (n=100)		Transgender women (n=60)		Transgender men (n=34)		GNC people (n=4)	
	n	%	n	%	n	%	n	%
Depression								
Depressed (based on CES-D 10)	(n=99)		(n=60)		(n=33)		(n=4)	
	45	45.45	27	45.00	15	45.45	2	50.00
Ever been diagnosed with depression	(n=92)		(n=57)		(n=30)		(n=2)	
	11	11.96	8	14.04	2	6.67	0	0.00
Of these, currently treated for depression	(n=11)		(n=8)		(n=2)		(n=1)	
	6	54.55	3	37.50	2	100.00	1	100.00
Anxiety	(n=90)		(n=52)		(n=33)		(n=3)	
Categorical								
Participants with no signs of anxiety	37	41.11	20	38.46	14	42.42	2	66.67
Participants with signs of mild anxiety	37	41.11	23	44.23	14	42.42	0	0.00
Participants with signs of moderate anxiety	10	11.11	6	11.54	3	9.09	1	33.33
Participants with signs of severe anxiety	6	6.67	3	5.77	2	6.06	0	0.00
Binary								
No/mild anxiety	74	82.22	43	82.69	28	84.85	2	66.67
Moderate/severe anxiety	16	17.78	9	17.31	5	15.15	1	33.33
Ever been diagnosed with anxiety	(n=94)		(n=57)		(n=33)		(n=3)	
	14	14.89	9	15.79	4	12.12	1	33.33
Of these, currently treated for anxiety	(n=13)		(n=8)		(n=4)		(n=1)	
	9	69.23	4	50.00	4	100.00	1	100.00

	All gender minority people (n=100)		Transgender women (n=60)		Transgender men (n=34)		GNC people (n=4)	
	n	%	n	%	n	%	n	%
Suicidality								
Suicidal ideation, lifetime	(n=97)		(n=59)		(n=33)		(n=3)	
	21	21.65	11	18.64	7	21.21	1	33.33
Suicide attempt, lifetime	(n=95)		(n=59)		(n=32)		(n=2)	
	16	16.84	11	18.64	4	12.50	0	0.00
Suicidal ideation, past year	(n=91)		(n=54)		(n=32)		(n=3)	
	12	13.19	6	11.11	4	12.50	0	0.00
Suicide attempt, past year	(n=92)		(n=56)		(n=32)		(n=3)	
	11	11.96	8	14.29	3	9.38	0	0.00
Alcohol use	(n=93)		(n=56)		(n=32)		(n=3)	
Categorical								
No alcohol use	35	37.63	24	42.76	11	34.38	0	0.00
Some alcohol use	8	8.60	4	7.14	3	9.38	0	0.00
Hazardous use	15	16.13	8	14.29	5	15.62	2	66.67
Harmful use	13	13.98	6	10.71	6	18.75	1	33.33
Alcohol dependence	22	23.66	14	25.00	7	21.88	0	0.00
Binary								
No/some alcohol use	43	46.24	28	50.00	14	43.75	0	0.00
Hazard/Harm/ dependence	50	53.76	28	50.00	18	56.25	3	100.00
Drug use	(n=93)		(n=55)		(n=33)		(n=3)	
Categorical								
No drug use	80	86.02	49	89.09	27	81.82	2	66.67
Some drug use	3	3.23	0	0.00	2	6.06	1	33.33
Harmful drug use	8	8.60	5	9.09	3	9.09	0	0.00
Drug dependence	2	2.15	1	1.89	1	3.03	0	0.00
Binary								
No/some drug use	83	89.25	49	89.09	29	87.88	3	100
Harmful use/ dependence	10	10.75	6	10.91	4	12.12	0	0.00

	All gender minority people (n=100)		Transgender women (n=60)		Transgender men (n=34)		GNC people (n=4)	
	n	%	n	%	n	%	n	%
Tobacco use	(n=92)		(n=54)		(n=32)		(n=4)	
Don't smoke at all	68	73.91	39	72.22	25	78.12	3	75.00
Smoke some days	16	17.39	10	18.52	5	15.62	1	25.00
Smoke everyday	8	8.70	5	9.26	2	6.25	0	0.00
Verbal harassment for being LGBTI								
In lifetime	(n=97)		(n=57)		(n=34)		(n=4)	
	76	78.35	44	77.19	27	79.41	4	100.00
Past year	(n=90)		(n=52)		(n=32)		(n=4)	
	56	62.22	34	65.38	20	62.50	1	25.00
Sexual violence								
In lifetime	(n=98)		(n=58)		(n=34)		(n=4)	
	46	46.94	29	50.00	12	35.29	3	75.00
Past year	(n=98)		(n=58)		(n=34)		(n=4)	
	39	39.80	26	44.83	10	29.41	2	50.00
Physical violence								
In lifetime	(n=99)		(n=59)		(n=34)		(n=4)	
	49	49.49	31	52.54	14	41.18	2	50.00
Past year	(n=99)		(n=59)		(n=34)		(n=4)	
	43	43.43	29	49.15	11	32.35	2	50.00
Intimate partner violence								
Sexual violence	(n=96)		(n=58)		(n=33)		(n=4)	
	39	40.62	26	44.83	9	27.27	3	75.00
Physical violence	(n=97)		(n=57)		(n=34)		(n=4)	
	37	38.14	25	43.86	10	29.41	1	25.00

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 sexual minority 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 study to describe levels of mental health among lesbian, gay, bisexual, transgender and intersex people in Malawi. It shows that LGBTI people, regardless of their specific sexual orientation or gender identity, show higher levels of depression, anxiety, suicidality, and substance use than the general population. LGBTI people are also 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.

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 Malawi, and evidence the seriousness of the rights violations against Malawians who identify as sexual or gender minorities, as well as the health consequences.

The findings from our study confirm that in Malawi, as described in other parts of the world (Meyer, 2003; Hatzenbuehler *et al.*, 2014), 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. Specifically, the findings in our study show that lesbian, gay, bisexual, transgender and intersex people living in Malawi, including men who have sex with men and women who have sex with women, have a higher burden of mental health concerns than exists in the general population. This high burden of mental health concerns is, at least in part, due to experiences of violence, stigma, prejudice and discrimination at individual and institutional level. As argued by other researchers, structural stigma in the form of laws and policies that disproportionally affect sexual and gender minority people, are likely to significantly contribute to these mental health disparities. Sections 137A, 153, 154 and 156 of the Malawian Penal Code, which criminalise same-sex activity, codify sexual orientation and gender identity-related stigma, prejudice and discrimination into the Penal Code (Krieger, 1999), and might therefore contribute to the high levels of mental health disorders among sexual and gender minority people living in Malawi, including men who have sex with men and women who have sex with women.

Despite the high burden of mental health concerns among the LGBTI people in our sample, many did not seek support or treatment from healthcare providers. The findings from our study confirm that this is likely because of previous, or anticipated experiences of discrimination in health

facilities. In this context, where the sexual orientation and gender identity-related prejudice in the general society also exists within health facilities and the treatment rooms of doctors, the vast majority of LGBTI people in our sample sought care at non-governmental organisations over government or private health facilities. 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. Our findings provide important contextual information to healthcare providers on the health impact of social exclusion based on sexual orientation and/ or gender identity.

In summary, our report paints a sobering picture of the state of mental health and well-being of LGBTI people in Malawi. It underscores the responsibilities that government, NGOs, researchers and funders have to address both the health concerns and the underlying causes. These underlying causes are rooted in the criminalisation of same-sex activity, in stigma, discrimination and marginalisation, and in prejudicial and biased attitudes by healthcare providers, other civil servants and the general population.

RECOMMENDATIONS

Recommendations for national government

- Decriminalise same-sex activity: legal reform to abolish the sections of the Penal Code of Malawi that contribute to sexual orientation and gender identity-related stigma, prejudice and discrimination against sexual and gender minority people living in Malawi, including men who have sex with men and women who have sex with women.
- 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 Malawi;
    - Provide training and resources to healthcare providers to increase access to gender affirming care;
    - Include teaching that affirms sexual and gender diversity 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:
    - Include safety as a key issue in all security plans and programming;
    - Ensure that the organisation has an emergency response protocol and emergency response kit for cases of violence;
    - 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;
    - Conduct outreach and education about mental health and the need to seek care among LGBTI persons;
    - 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 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.

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.

- Conduct research, in partnership with civil society organisations, to further understand the mental health and well-being of LGBTI populations in Malawi and to fill the knowledge gaps identified by our study.
- 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.
- When conducting research on sexual and gender minority people's health, include information about how you operationalise sexual orientation and gender identity in your study, so that studies can be comparable.
- Aim to better understand the health and well-being of young LGBTI persons under the age of 18, in close consultation with 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.

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 Nationals 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.

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.

Berman, A. H. *et al.* (2003) 'DUDIT The Druge 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.

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.

Blondeel, K., de Vasconcelos, S., García-Moreno, C., Stephenson, R., Temmerman, M., & Toskin, I. (2018). Violence motivated by perception of sexual orientation and gender identity: a systematic review. *Bulletin of the World Health Organization,* 96(1), 29.

Blosnich, J., Lee, J. G. L. and Horn, K. (2013) 'A *systematic review of the aetiology of tobacco disparities for sexual minorities.', Tobacco control,* 22(2), pp. 66–73.

Bockting, W. O. *et al.* (2013) 'Stigma, Mental Health, and Resilience in an Online Sample of the US Transgender Population', *American Journal of Public Health*, 103(5), pp. 943–951.

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.

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.

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-.

Carroll, A. and Itaborahy, L. P. (2015) *State-Sponsored Homophobia*. Geneva. Available at: http://ilga.org/historic/Statehomophobia/ILGA_State_Sponsored_Homophobia_2009.pdf.

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.

Cole, B., and L. Han. (2011) *Freeing Ourselves: A Guide to Health and Self Love for Brown Bois*. Oakland: Brown Boi Project.

Conroy, A. A. and Chilungo, A. (2014) 'Male victims of sexual violence in rural Malawi: the overlooked association with HIV infection', *AIDS Care*, 26(12), pp. 1576–1580.

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.

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.

Currier, A. (2014) 'Arrested Solidarity : Obstacles to Intermovement Support for LGBT Rights in Malawi', *Women's Studies Quarterly*, 42(3), pp. 146–163.

De Cuypere, G. and Winter, S. (2016) 'A gender incongruence diagnosis: where to go?', *The Lancet Psychiatry*, 3(9), pp. 796–797.

Dionne, K. Y., Dulani, B., & Chunga, J. (2014). *Research note: Attitudes toward homosexuality in sub-Saharan Africa, 1982-2012*. Unpublished manuscript.

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.

Ekins, R., and D. King. (2006) *The Transgender Phenomenon*. Thousand Oaks, CA: SAGE.

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.

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.

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.

Global alcohol report: Malawi (2014). Available at: http://www.who.int/substance_abuse/publications/global_alcohol_report/profiles/mwi.pdf?ua=1.

Global Legal Research Centre (2014) 'Laws on Homosexuality in African Nations', 6462(February), pp. 1–26.

Goldbach, J. T. *et al.* (2014) 'Minority Stress and Substance Use in Sexual Minority Adolescents: A Meta-analysis', *Prevention Science*, 15(3), pp. 350–363.

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.

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.

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.

Hatzenbuehler, M. L. (2011) 'The Social Environment and Suicide Attempts in Lesbian, Gay, and Bisexual Youth', *Pediatrics*, 127(5), pp. 896–903.

Hatzenbuehler, M. L. *et al.* (2014) 'Structural stigma and all-cause mortality in sexual minority populations', *Social Science and Medicine*, 103, pp. 33–41.

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.

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.

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.

Human Rights Watch (2018) *'Let Posterity Judge': Violence and Discrimination against LGBT People in Malawi*. New York City: HRW.

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.

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.

James, S.E. et al., 2016. *The Report of the 2015 U.S. Transgender Survey,* Washington, DC: National Center for Transgender Equality.

Johnston, T. (2014) *Proud & Healthy. An overview of community based needs assessments on sexual health of LGBTIs in Southern Africa.* Amsterdam: COC Netherlands.

Kara, S. (2017) *Gender is not an illness: How pathologizing trans people violates international human rights law.* New York: GATE.

Kim, M. H. *et al.* (2015) 'Factors associated with depression among adolescents living with HIV in Malawi', *BMC Psychiatry,* 15(1), p. 264.

King, M. *et al.* (2008) 'A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people', *BMC Psychiatry*, 8(1), p. 70.

Kohler, I. V. *et al.* (2017) 'The Demography of Mental Health Among Mature Adults in a Low-Income, High-HIV-Prevalence Context', *Demography*, 54(4), pp. 1529–1558.

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.

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.

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.

Mandal, M. and Hindin, M. J. (2013) 'Men's controlling behaviors and women's experiences of physical violence in Malawi', *Maternal and Child Health Journal*, 17(7), pp. 1332–1338.

Manderson, L. (2012) *Technologies of Sexuality, Identity, and Sexual Health*. Abingdon: Routledge.

Marshal, M. P. *et al.* (2008) 'Sexual orientation and adolescent substance use: a meta-analysis and methodological review', *Addiction,* 103(4), pp. 546–556.

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.

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.

McKinnon, B. *et al.* (2016) 'Adolescent suicidal behaviours in 32 low-and middle-income countries.', *Bulletin of the World Health Organization*, 94(5), p. 340.

Meyer, I. H. (1995) 'Minority Stress and Mental Health in Gay Men', *Journal of Health and Social Behavior*, 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.

Msyamboza, K. P. *et al.* (2011) 'The Burden of Selected Chronic Non-Communicable Diseases and Their Risk Factors in Malawi: Nationwide STEPS Survey', *PLoS ONE*, 6(5), p. e20316.

Müller, A. *et al.* (2018) 'The no-go zone: a qualitative study of access to sexual and reproductive health services for sexual and gender minority adolescents in Southern Africa', *Reproductive Health*, 15(1), p. 12.

Müller, A. and Daskilewicz, K. (2018) *'These are the topics you cannot run away from': Teaching lesbian, gay, bisexual and transgender health in health professions education in Malawi and South Africa.* Amsterdam: COC Netherlands.

Muula, A., Jumbe, V.C., Kamba, D., Gama, V.B. and Trapence, G. (2017). *Technical Report for the Study on Perception, Barriers and Facilitators to Access of Sexual and Reproductive Health Services for People who Inject Drugs, Female*

Sex Workers, Transgender women and Men who have Sex with Men in Malawi. Unpublished report. UNDP.

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.

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: Human Rights Watch.

National Statistical Office (NSO) [Malawi] and ICF (2017) *Malawi Demographic and Health Survey 2015-16.* Available at: https://dhsprogram.com/pubs/pdf/FR319/FR319.pdf.

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.

Nock, M. K. *et al.* (2008) 'Suicide and Suicidal Behavior', *Epidemiologic Reviews*, 30(1), pp. 133–154.

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.

Peitzmeier, S., Gardner, I., Weinand, J., Corbet, A. & Acevedo, K. (2017) 'Health impact of chest binding among transgender adults: a community-engaged, cross-sectional study', *Culture, Health & Sexuality*, 19(1), pp. 64-75.

Pelser, E. *et al.* (2005) *Intimate Partner Violence Results from a National Gender-Based Violence Study in Malawi*. Available at: www.issafrica.org.

Pinel, E. C. (1999) 'Stigma consciousness: The psychological legacy of social stereotypes.', *Journal of Personality and Social Psychology*, 76(1), pp. 114–128.

Poteat, T. *et al.* (2017) 'HIV prevalence and behavioral and psychosocial factors among transgender women and cisgender men who have sex with men in 8 African countries: A cross-sectional analysis', *PLoS Medicine*, 14(11).

Radloff, L. S. (1977) 'The CES-D Scale: A self report depression scale for research in the general population', *Applied Psychological Measurement*. Sage PublicationsSage CA: Thousand Oaks, CA, 1(3), pp. 385–401.

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.

Rosser, B. R. S. *et al.* (2007a) '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.

Rosser, B. R. S. *et al.* (2007b) '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.

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.

Shaikh, M. A. *et al.* (2016) 'Suicide attempts and behavioral correlates among a nationally representative sample of school-attending adolescents in the Republic of Malawi', *BMC Public Health*. BioMed Central, 16(1), p. 843.

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.

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*. Taylor & Francis, 0(0), pp. 1–14.

Teivaanmäki, T. *et al.* (2018) 'Depressive symptoms are common among rural Malawian adolescents', *Child: care, health and development,* 44(4), pp. 531–538.

The Other Foundation (2016) *Canaries in the Coal mines: An analysis of spaces for LGBTIQ activitism in Malawi, The Other Foundation*. Johannesburg. Available at: http://theotherfoundation.org/wp-content/uploads/2016/10/Canaries_Summary_epub_Draft4_MJ6.pdf.

Umar, E., Jumbe, V., Bandawe, C. (2018). *Baseline study: Improving the Lives of Transgender People in Malawi Project.* Unpublished report.

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.

World Health Organization (2012) *WHO Global Report: Mortality attributable to tobacco*. Geneva: WHO.

World Health Organization (2017) *Depression and Other Common Mental Disorders Global Health Estimates*. Available at: http://www.who.int/mental_health/management/depression/prevalence_global_health_estimates/en/.

World Health Organization (2018a) *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.

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 women[7]; 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 men[8]; 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.
- *Heterosexual:* any participant who identified as 'heterosexual' and had sex with only people of a different sex/gender in the past year.

7 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.

8 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

- *Transgender women*: Those who self-identified as trans women; those who self-identified as women and were assigned male at birth.
- *Transgender men:* those who self-identified as trans men; those who self-identified as men and were assigned female at birth.
- *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.[9]

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

9 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 the 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 asses 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 where 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

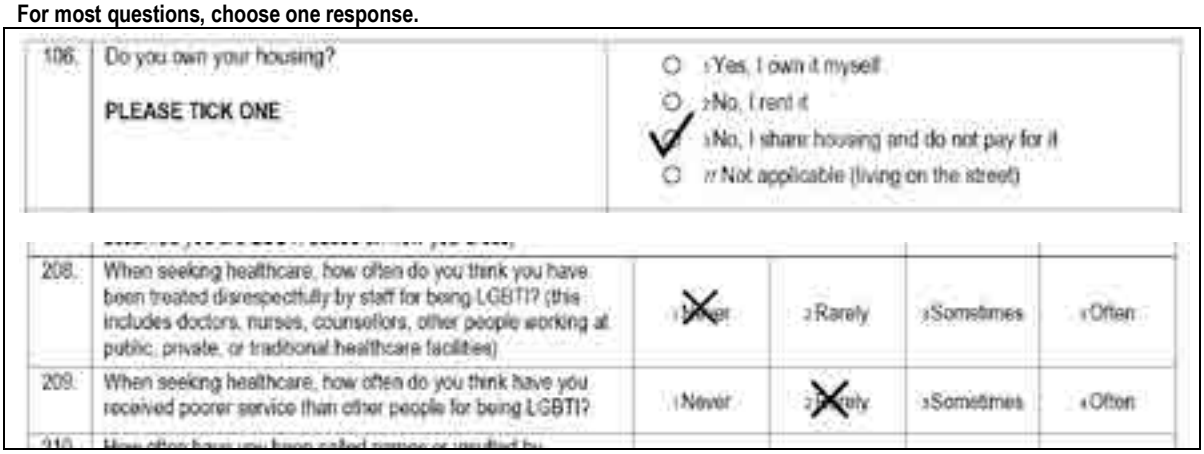
MALAWI—ENGLISH

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.

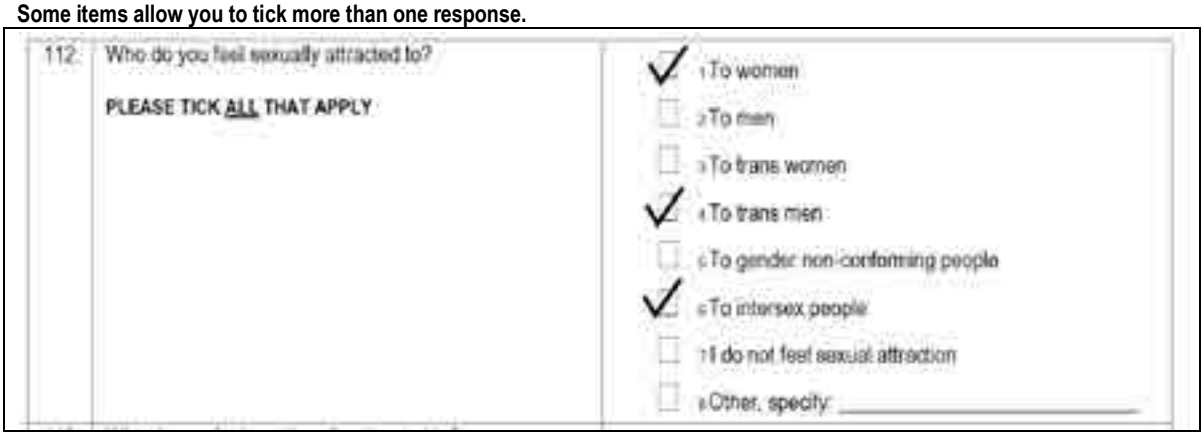
For most questions, choose one response.



106.	Do you own your housing? **PLEASE TICK ONE**	○ 1 Yes, I own it myself ○ 2 No, I rent it ✓ 3 No, I share housing and do not pay for it ○ 77 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)	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

Some items allow you to tick more than one response.



112.	Who do you feel sexually attracted to? **PLEASE TICK ALL THAT APPLY**	✓ 1 To women ☐ 2 To men ☐ 3 To trans women ✓ 4 To trans men ☐ 5 To gender non-conforming people ✓ 6 To intersex people ☐ 7 I do not feel sexual attraction ☐ 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 **insulted or verbally harassed** you because of being LGBTI?	a. In your life time?	1 Yes	2 No
		b. In the last 12 months?	1 Yes	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 when you were sick or injured because you could not afford it?	✗ 1 Yes	(✗) 2 No

Questionnaire consent statement

Introduction

The Gender Health and Justice Research Unit at the University of Cape Town, in partnership with COC Netherlands,the Center for the Development of the People, and the Department of Public Health at the Malawi College of Medicine (CoM) is surveying people who are/identify as LGBTI. We aim to develop a better understanding of mental health, wellbeing, and their experiences of in order to inform advocacy efforts for improved services delivery.

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.

Why is this study being done?

We are conducting this study in order to learn more about the social and service environment that LGBTs experience in this country. 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.

Why have I been identified?

You have been selected to be interviewed because we believe you may be able to give us information that will be useful to us. We believe that you may be willing to talk to us in a confidential manner.

What are the benefits of this study?

The benefits of this study are to the larger society. You may not personally get any benefits now. You may however wish to know that the findings of this study may be published in academic literature. This may be of benefit to the scientific community, policy makers and service delivery.

What are the potential harms of participating in this study?

We ask that you answer each of the questions as accurate as possible. As we will not ask your name and any identifiying details, your answers will not be linked back to you. It is possible that you may feel uncomfortable to answer some of the questions. If you so feel uncomfortable, please inform the interviewer. You are also free to contact the people listed below to access mental healthcare or any other services that may be appropriate.

Confidentiality

We wish to confirm with you that it is acceptable to you that we do not record your name or any other information that may be used to identify you. We also state that in the reports that we will produce, we will not link any of the findings back to you.

Instructions to complete the questionnaire

If you are willing to participate in this study, 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. Or if you would prefer, the interviewer will help you complete the questionnaire. S/he will be asking the questions and then receiving the answers from you.

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.

What if I want more information about the study?

In case you would like to get more information about the study, please contact the following:

Dr Adamson Muula
Department of Public Health
College of Medicine
Phone: 0884233 486
Email address: amuula@medcol.mw

And

Prof Alex Muller
Gender Health and Justice Research Unit
University of Cape Town
Falmouth Building, Entrance 1, Level 1, Room 1.01.5
+27 (021) 406 6021
alexandra.muller@uct.ac.za

What if I have complaints to make about the study?

If you have questions about your rights as a research participant or any concerns about the study, please contact one or both of these committees:
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.

College of Medicine Research and Ethics Committee (COMREC), John Chiphangwi Resource Center at the College of Medicine; phone: 265 01 871 911/ +265 1 874 377. Fax: +265 1 874 740
or email: comrec@medcol.mw

To begin, please complete the eligibility questions below with the interviewer.

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?**
   - ○ 1 Yes
   - ○ 0 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: _____

MALAWI—ENGLISH

Section 1a: Background

101.	How old are you?	**PLEASE WRITE YOUR AGE:** _____
102.	In which country do you currently live? **PLEASE TICK ONE**	○ 1 Angola ○ 2 Botswana ○ 3 Kenya ○ 4 Lesotho ○ 5 Malawi ○ 6 Mozambique ○ 7 Namibia ○ 8 South Africa ○ 9 Swaziland ○ 10 Tanzania ○ 11 Zambia ○ 12 Zimbabwe
103.	How did you hear about this study?	○ 11 Center for the Development of People (CEDEP)
104.	How do you identify your race?	○ 1 Black ○ 2 White ○ 5 Other specify: _____
105.	In what type of housing do you currently live?	○ 1 House ○ 2 Apartment / flat ○ 3 Shanty / Shack ○ 4 Hotel ○ 5 Mobile house ○ 6 On the street

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

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

116.	In terms of your sexual orientation, how do you identify? **PLEASE TICK ONE**	○ 1 Lesbian ○ 2 Bisexual ○ 3 Gay ○ 4 Heterosexual ○ 5 Asexual ○ 6 Other; please specify _____
117.	In terms of your gender identity, how do you identify? **PLEASE TICK ONE**	○ 1 Woman ○ 2 Man ○ 3 Trans woman ○ 4 Trans man ○ 5 Gender non-conforming ○ 6 Other; please specify:_____
118.	How was your sex classified at birth? **PLEASE TICK ONE**	○ 1 Female ○ 2 Male ○ 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**	○ 1 Female ○ 2 Male ○ 3 Intersex ○ 4 Unspecified ○ 5 Other; please specify:_____ ○ 77 I do not have an identity document

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 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 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

Section 1e: Being intersex and self

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

<u>Place an X in one box</u> 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

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

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

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 when you were sick or injured because you could not afford it?	1 Yes	0 No
215.	Have you postponed or not tried to get HIV testing because you could not afford it?	1 Yes	0 No
216.	Have you postponed or not tried to get STI testing or STI/HIV treatment because you could not afford it?	1 Yes	0 No
217.	Have you postponed or not tried to get needed healthcare when you were sick or injured 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 HIV testing 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 STI testing or STI/HIV treatment 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

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)	0 Never (**Go to next section**)	1 Once a month or less often	(2) 2-4 times a month	(3) 2-3 times a week	(4) 4 times a week or more often
312.	Do you use more than one type of drug on the same occasion?	0 Never	1 Once a month or less often	(2) 2-4 times a month	(3) 2-3 times a week	(4) 4 times a week or more often
313.	How many times do you take drugs on a typical day when you use drugs?	(0) 0	(1) 1-2	(2) 3-4	(3) 5-6	(4) 7 or more
314.	How often are you influenced heavily by drugs?	0 Never	1 Less often than once a month	2 Every month	3 Every week	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?	0 Never	1 Less often than once a month	2 Every month	3 Every week	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?	0 Never	1 Less often than once a month	2 Every month	3 Every week	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?	0 Never	1 Less often than once a month	2 Every month	3 Every week	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?	0 Never	1 Less often than once a month	2 Every month	3 Every week	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?	0 Never	1 Less often than once a month	2 Every month	3 Every week	4 Daily or almost every day
320.	Have you or anyone else been hurt (mentally or physically) because you used drugs?	0 No		2 Yes, but not over the past year		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?	0 No		2 Yes, but not over the past year		4 Yes, over the past year

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

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.	0 Rarely or none of the time (less than 1 day)	1 Some or a little of the time (1-2 days)	2 Occasionally or a moderate amount of time (3-4 days)	3 All of the time (5-7 days)
332.	I had trouble keeping my mind on what I was doing.	0 Rarely or none of the time (less than 1 day)	1 Some or a little of the time (1-2 days)	2 Occasionally or a moderate amount of time (3-4 days)	3 All of the time (5-7 days)
333.	I felt depressed.	0 Rarely or none of the time (less than 1 day)	1 Some or a little of the time (1-2 days)	2 Occasionally or a moderate amount of time (3-4 days)	3 All of the time (5-7 days)
334.	I felt that everything I did was an effort.	0 Rarely or none of the time (less than 1 day)	1 Some or a little of the time (1-2 days)	2 Occasionally or a moderate amount of time (3-4 days)	3 All of the time (5-7 days)
335.	I felt hopeful about the future.	3 Rarely or none of the time (less than 1 day)	2 Some or a little of the time (1-2 days)	1 Occasionally or a moderate amount of time (3-4 days)	0 All of the time (5-7 days)
336.	I felt fearful.	0 Rarely or none of the time (less than 1 day)	1 Some or a little of the time (1-2 days)	2 Occasionally or a moderate amount of time (3-4 days)	3 All of the time (5-7 days)
337.	My sleep was restless.	0 Rarely or none of the time (less than 1 day)	1 Some or a little of the time (1-2 days)	2 Occasionally or a moderate amount of time (3-4 days)	3 All of the time (5-7 days)
338.	I was happy.	3 Rarely or none of the time (less than 1 day)	2 Some or a little of the time (1-2 days)	1 Occasionally or a moderate amount of time (3-4 days)	0 All of the time (5-7 days)
339.	I felt lonely.	0 Rarely or none of the time (less than 1 day)	1 Some or a little of the time (1-2 days)	2 Occasionally or a moderate amount of time (3-4 days)	3 All of the time (5-7 days)
340.	I could not "get going."	0 Rarely or none of the time (less than 1 day)	1 Some or a little of the time (1-2 days)	2 Occasionally or a moderate amount of time (3-4 days)	3 All of the time (5-7 days)
341.	Has a healthcare provider ever told you that you have clinical depression?			1 Yes	0 No **(Go to 342)**
341a.	If yes, are you current being treated for clinical depression (e.g. medication, therapy)?			1 Yes	0 No

Section 3e

342.	Has there ever been a period of time when you thought about committing suicide?	a. In your lifetime?	1 Yes	0 No
		b. In the last 12 months?	1 Yes	0 No
343.	Did you ever try to end your own life, whether or not you had thought about it ahead?	a. In your lifetime?	1 Yes	0 No
		b. In the last 12 months?	1 Yes	0 No

Section 3f: Social support

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

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?			1 Yes	0 No
402.	Has anyone ever threatened to reveal that you are LGBTI to others without your permission?			1 Yes	0 No
403.	Has anyone ever **insulted or verbally harassed** you because of being LGBTI?		a. In your life time?	1 Yes	0 No
			b. In the last 12 months?	1 Yes	0 No
404.	Has an **intimate partner** (past or current) ever threatened to reveal that you are LGBTI to others without your permission?			1 Yes	0 No
405.	Has an intimate partner (past or current) ever made you feel worthless because of being LGBTI?			1 Yes	0 No
406.	Has an intimate partner (past or current) ever made you feel ashamed because of being LGBTI?			1 Yes	0 No
407.	Have you ever been coerced, pressured or forced into marriage?			1 Yes	0 No
408.	Have you ever been **sexually assaulted**	By an intimate partner of the same sex as you?	a. In your life time?	1 Yes	0 No
			b. In the last 12 months?	1 Yes	0 No
		By an intimate partner of a different sex than you?	c. In your life time?	1 Yes	0 No
			d. In the last 12 months?	1 Yes	0 No
		By someone you know (not an intimate partner but a neighbour, friend, family member, etc.)	e. In your life time?	1 Yes	0 No
			f. In the last 12 months?	1 Yes	0 No
		By a stranger	g. In your life time?	1 Yes	0 No
			h. In the last 12 months?	1 Yes	0 No
		By someone you live with? (an intimate partner or other person)	i. In your life time?	1 Yes	0 No
			j. In the last 12 months?	1 Yes	0 No
409.	Have you ever been **physically assaulted**	By an intimate partner of the same sex as you?	a. In your life time?	1 Yes	0 No
			b. In the last 12 months?	1 Yes	0 No
		By an intimate partner of a different sex than you?	c. In your life time?	1 Yes	0 No
			d. In the last 12 months?	1 Yes	0 No
		By someone you know (not an intimate partner but a neighbour, friend, family member, etc.)	e. In your life time?	1 Yes	0 No
			f. In the last 12 months?	1 Yes	0 No
		By a stranger	g. In your life time?	1 Yes	0 No
			h. In the last 12 months?	1 Yes	0 No
		By someone you live with? (an intimate partner or other person)	i. In your life time?	1 Yes	0 No
			j. In the last 12 months?	1 Yes	0 No

If you answered yes to sexual or physical assault <u>in your life time</u>, 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?	1 Yes	0 No
414.	Do you think any of these incidents (sexual or physical assault) were motivated by your gender identity?	1 Yes	0 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?	1 Yes	0 No
416.	Did any of these incidents result in flashbacks, nightmares, or reliving the event?	1 Yes	0 No
417.	Have you avoided situations or people who remind you of the incident(s)?	1 Yes	0 No
418.	Following the incident(s), have you felt jumpy, irritable, or restless?	1 Yes	0 No

If you answered yes to sexual or physical assault <u>in the last 12 months</u>, 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?				1 Yes	0 No
411.	If you have experienced physical or sexual assault in the last 12 months, have you **reported it to the police**?				1 Yes	0 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?	1 Never	2 Rarely	3 Sometimes	4 Often	5 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.

<u>Return this survey to the person who gave it to you when you are finished.</u>

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
Johns Hopkins University Research Project	**Fatima Zulu: 0999955028** **Blantyre** **Services: HIV counselling**
Dignitals International Organisation / Zomba Central Hospital	**Mkwatula Louis: 0999198472** **Zomba Central Hospital Private Bag 1071** **Services: HIV counselling**
Mangochi District Hospital	**General Medical Doctor: Changamire Enock: (+265)0884596559** **Community Health Nurse: Chausa Joyce: (+295)0888/999 860176** **Abudu Lamusi: (+265)0999684910** **Mangochi District Hospital P.O Box 42 Mangochi.** **Services: Any medical services and counselling**
Malukula Health Centre	**Chikasema Liness: (+265)0888724465** **Malukula Health Centre P.O Box 42 Mangochi.** **Services: Any medical services and counselling**

Kukelanga Health Centre	**Masiyano Daniel: (+265)999331639** **Kukelanga Health Centre P. O Box Mangochi.** **Services: Any medical services and counselling**
MonkeyBay District Hospital	**Chindebvu Veronica: (+265)0888546983** **MonkeyBay District Hospital P. O Box 33 Mangochi.** **Services: Any medical services and counselling**
MALDECO Health Clinic	**Msonkho Stenkam: (+265)0999206690** **MALDECO Health Clinic P. O Box 45 Mangochi.** **Services: Any medical services and counselling**
ASSALAM Clinic	**Phiri Charles Major: (+265)995859455** **ASSALAM Clinic Private Bag 35 Mangochi.** **Services: Any medical services and counselling**
Bwaila Hospital	**Chelewani Tereza Dr.: (+265)999586142** **Bwaila Under 5 Clinic Bwaila Hospital P.O Box 1247 Lilongwe.** **Services: Any medical services and HIV counselling**
Area 18 Health Center	**Chiothamisi Bertha: (+265)0993113050** **Area 18 Health Center P.O Box Lilongwe.** **Services: Any medical services and HIV counselling**
Kawale Health Center	**Liwondo Hellen: (+265)999306164** **Kawale Health Center Private Bag 20 Lilongwe.** **Services: Any medical services and HIV counselling**
Dedza District Hospital	**Lingani Jessie: (+265)0999023331** **Dedza District Hospital P.O Box 136 Dedza.** **Services: Any medical services and HIV counselling**
Mzuzu Central Hospital	**Clement Mtika: 0888874617 / 0993033421** **Peter Msukwa: 0999943649** **Mzuzu Central Hospital P.O Box 209 Mzuzu** **Services: HIV testing and counselling service**
St John's Hospital	**Kondwani Manda: 0888858853 / 0995480954** **Mac Lennan Mhone: 0999938014** **Lucky Mwamlima: 0995675482** **St John Hospital P.O Box 18 Mzuzu** **Services: Any medical services**
Mzuzu Health Centre	**Chimaliro Wezzie: (+265)0888524719)** **Racheal Mwanza: (+265) 888 639 482** **Mzuzu Health Centre P.O Box 299 Mzuzu** **Services: HIV counselling and testing**
Center for the Development of People (CEDEP) (LGBTI Organisation)	**Tel: +265 1 761 696** **Lilongwe**

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

Notes

Notes