Caribbean Vulnerable Communities
University of Alabama at Birmingham

Estimation of Key Population Size of Men Who Have Sex with Men and Transgender Women in Belize

Final Report, October 2018

TITLE OF THE PROJECT

Estimation of Key Population Size of Men Who Have Sex with Men (MSM), and Transgender Women in Belize

Final Report, August 1st, 2018

Submitted to the **United Nations Development Programme** (UNDP), the National AIDES Commission of Belize and the Belize Country Coordinating Mechanism for the Global Fund by the Caribbean Vulnerable Communities Coalition (CVC) and the University of Alabama at Birmingham.

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- GoBelize
- Promoting Empowerment Through Awareness For Les/Bi Women (PETAL)
- Our Circle
- Belize Youth Empowerment for Change
- The Collaborative Network for Persons Living With HIV (CNET+)
- Productive Women in Action (POWA)
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- The United Nations Programme on HIV/AIDS (UNAIDS) in Belize

Caribbean Vulnerable Communities Coalition

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Antiretroviral
BBS	Biological and Behavioural Survey
FSW	Female Sex Worker
GBV	Gender-based violence
HPV	Human papillomavirus
HSV	Herpes simplex virus
IFW	Indigenous field worker
IPV	Intimate partner violence
KP	Key Populations
MSM	Men Who Have Sex with Men
OECS	Organization of Eastern Caribbean States
PAR	Participatory action research
PrEP	Pre-exposure prophylaxis
SRH	Sexual and reproductive health
STI	Sexually transmitted infection
TB	Tuberculosis
TW	Transgender Women
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

PREFACE

Men who Have Sex with Men and Trans women are uniquely vulnerable to HIV infection. Yet they are often underserved, due in part to a limited understanding of their needs and realities. The Caribbean Vulnerable Communities Coalition has been formalising the work it has been doing over the last seven years in the area of strategic information on key populations through the creation of its research arm, the Robert CARR Centre for Action Research Resources (CARR).

An effective response to HIV at the country level requires strategic information that is systematically collected and consolidated, analysed and applied. The Robert CARR Centre for Action Research Resources uses a collaborative approach to research that involves all stakeholders throughout the research process, from establishing the research questions, to developing data collection tools, to analysis and dissemination of findings. It is in this spirit that CVC in partnership with the University of Alabama at Birmingham, the local authorities in Belize, as well as a myriad of in-country civil society partners have come together to conduct this important Population Size Estimate and Behavioural Survey in Men Who have Sex with Men and Trans Women in Belize.

The specific objectives of the study were:

1. To determine size estimates for MSM and transgender women in Belize, by using different estimation methods and triangulating the findings to provide the most plausible estimates for the different Key Populations
2. To conduct a behavioural survey of MSM and trans women in the Belize and develop sub-population profiles of risk and vulnerability
   More specifically the survey aimed to:
   - ✓ Measure key socio-demographic characteristics
   - ✓ Assess the knowledge of and attitudes towards HIV/AIDS
   - ✓ Identify sexual practices and risk taking behaviours
   - ✓ Evaluate knowledge of and access to prevention services
   - ✓ Assess the use of and access to health services
   - ✓ Measure STI testing and occurrence and treatment seeking behaviours
   - ✓ Quantify alcohol and drug use
   - ✓ Evaluate attitudes of stigma and discrimination towards key populations
3. To strengthen the capacity of local institutions to conduct mapping, size estimation, and behavioural surveillance of HIV and other STIs among these sub-populations

Estimates for the sizes of key populations in the Caribbean have constituted a large data gap for some time in the region. Conducting estimates has been identified as a priority issue by the Belize Country Coordinating Mechanism CCM, the Belize Ministry of Health and National Aids Commission as well as multiple civil society organizations throughout the country to enhance

surveillance and strengthen prevention, treatment and care planning for MSM and trans women in Belize.

This Key Population Size Estimation of MSM and trans women in Belize, made possible through funding available under the Belize country Global Fund Grant, is the first official study of its kind to estimate the size of these populations across the six districts of Belize.

Beyond the size estimates, this survey provides rich data that helps characterise the different subgroups that make up the larger groupings of key populations, and teases out the knowledge, behaviour, risks and vulnerabilities of each of the sub-groups.

While governments have the overall responsibility for strategic information systems, NGOs and civil society as a whole possess critical and unique knowledge and skills that are indispensable for planning and collecting data on key populations.

This study exemplifies the added value of state–civil society partnerships for obtaining and understanding strategic information on key populations. The study implementation illustrates the basic factors these partnerships need to address to be effective. These included specification of objectives and degree of convergence, mechanisms for combining effort and managing cooperation, determination of appropriate roles and responsibilities, and capacity to fulfil those roles and responsibilities.

The methodology section of this report outlines the steps undertaken throughout this study to achieve all of this. Whilst the results obtained and presented in the report below, speak to the potential this collaboration between sectors has.

It is our profound hope that the data collected through these partnerships provide the strategic evidence that policy-makers, programme directors and civil society organisations need to make informed decisions to improve programmes for MSM and Trans Women in Belize and ensure that the necessary resources adequately cover the populations in need of HIV prevention, treatment and care services.

In addition to the critical partners mentioned above, we would also like to acknowledge the immense contribution of all the survey participants who came forward to share personal and often very intimate details about themselves and their daily realities. Whilst they all remain anonymous in this report, we hope that what they have generously shared will give visibility to, and provide guidance for addressing, the issues MSM and trans women face in Belize.

Ivan Cruikshank
Executive Director,
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EXECUTIVE SUMMARY

This report presents the findings from a behavioural survey and Population Size Estimate implemented across the six districts of Belize in men who have Sex with men (MSM) and trans women. The survey and estimate were implemented in the context of the Belize country Global Fund grant.

A pre-assessment phase was conducted in Belize between the 18th and the 22nd October 2017.This assisted with developing the study protocol. IRB approval for the study was obtained from the Ministry of health in Belize at the end of December 2017. The training of the local fieldwork team and data collection took between mid-January for the first three districts (Belize, Orange Walk and Corozal), and the end of April 2018 for the remaining three (Cayo, Stann Creek and Toledo).

A total sample size of 1,146 eligible participants consisting of 1026 MSM and 120 TW, were recruited to participate in the survey via respondent-driven sampling (RDS) and indigenous field worker sampling (IFWS), and fully described in the methodology section of this report.

We used four population size estimation methods for MSM, and two for transgender women, to calculate the size of each of these key populations in Belize. The different methods used, and the justification of the selections made are outlined in the Size Estimate Results, but the guiding principle was to use the most rigorous methodology to statistically produce population-based estimates that are accurate, reliable and relevant for the Belizean setting.

The study provides a wealth and diversity of data regarding access to prevention programmes and testing in each district. It provides results on sexual behaviour in the last 12 months with main, casual, sex work and paying partners including condom use, stigma and discrimination, gender-based violence, HIV and STI testing and treatment, substance use, and sexual health.

This data will make a large contribution to the available epidemiological research available on Belize in the area of HIV/STI prevention among MSM and trans women. It highlightes similarities as well as differences between the districts and provides rich data to analyse the relationship between a series of critical variables such as individual and socio-demographic factors, when it comes to HIV test-seeking and risk-taking behaviours. However, at the same time, the results also point to the pressing need for continued and follow-up data collection. Although the study provides insights in areas related to gender-based violence, mental health and substance abuse, the overall length of the survey limited us from a thorough exploration of these themes, in order to better define more effective and efficient screening and prevention strategies.

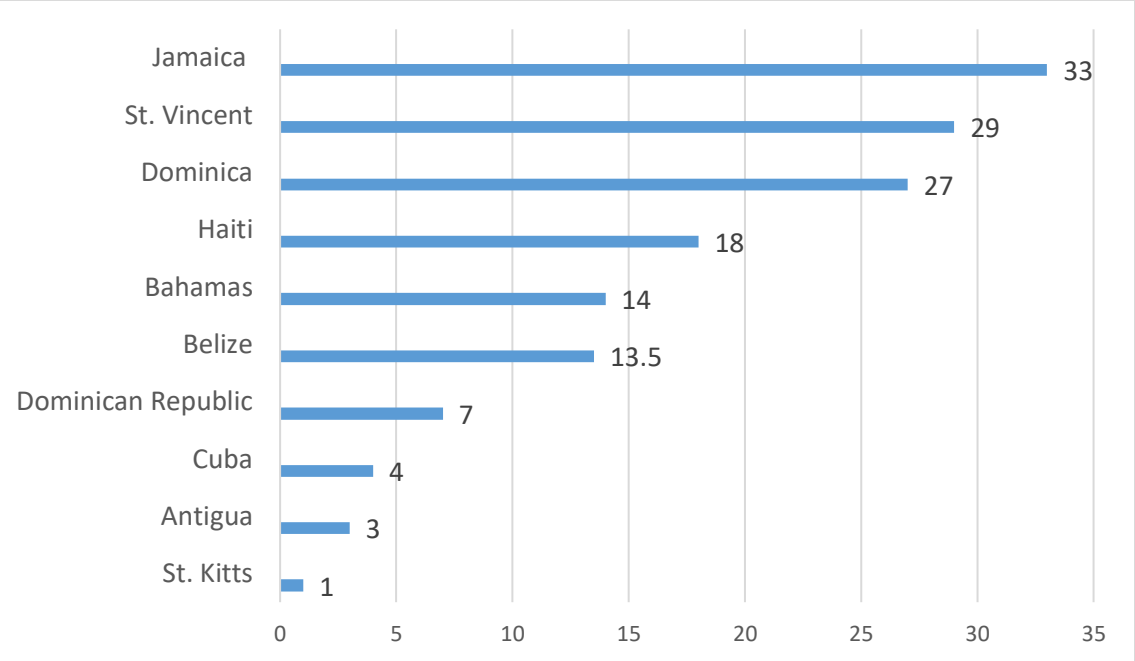
BRIEF LITERATURE REVIEW ON HIV AND MSM AND TRANS WOMEN

HIV in the Caribbean with a Focus on MSM and Trans Women

HIV/AIDS is a serious epidemiological concern in the Caribbean, which has second-highest HIV prevalence in world behind sub-Saharan Africa (UNAIDS 2016).[i] At the end of 2016, adult HIV prevalence in the Caribbean was estimated to be 1.3%; however, prevalence rates are many fold higher in key populations in the Caribbean, including men having sex with men (MSM), transgender women, and female sex workers. For these at-risk populations, the prevalence of HIV/AIDS ranges from 5 to 33% as of 2005 (CARICOM-PANCAP, 2008)[ii]. Data from the 2014 Global AIDS Response Progress Reporting on MSM HIV prevalence rates in different countries throughout the region is summarised in the table below.

Figure 1. MSM Prevalence HIV Prevalence Rates in the Caribbean

(Adapted from Global AIDS Response Progress Reporting Data)



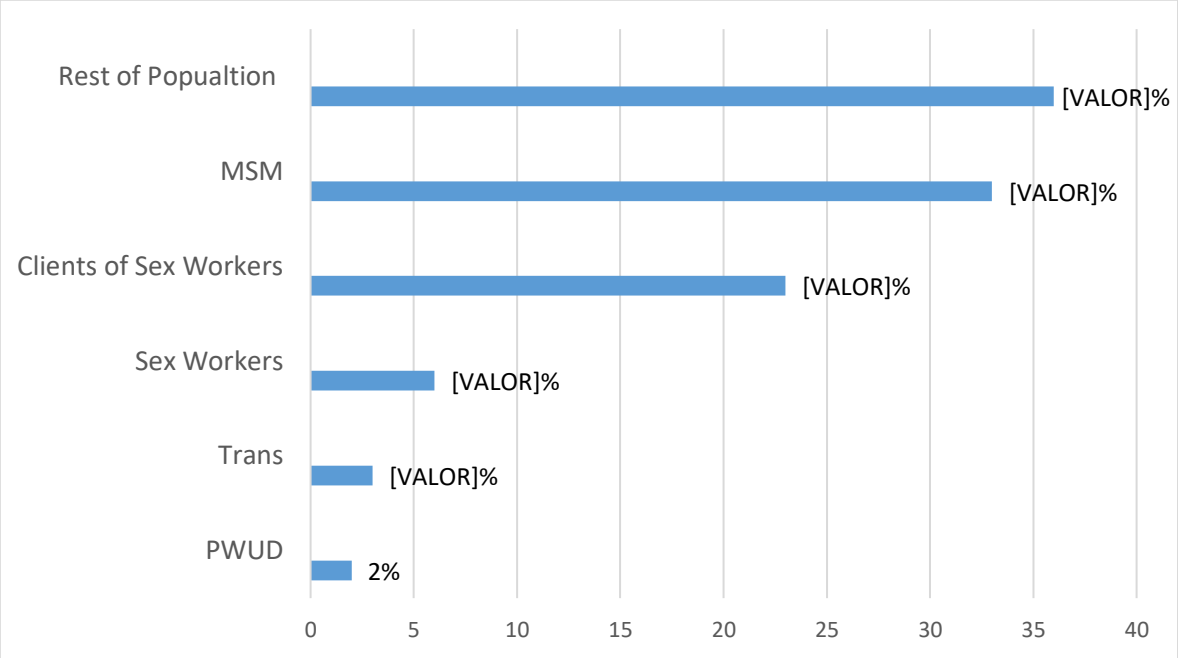
Factors driving the HIV/AIDS epidemic specific to the Caribbean context include sex tourism, unprotected sex, gender inequality, and serious socioeconomic burdens on the poorest members of the population (PEPFAR, 2012).[iii] Recent data from Latin America and the Caribbean has started to show that that HIV prevalence for trans women is often higher still than that found in MSM, especially among transgender women sex workers. (UNAIDS 2016)[iv]. However, there remains a great need for more data with larger sample sizes to better understand the situation. Stigma and discrimination, lack of social and legal recognition of their affirmed gender, and exclusion from employment and educational opportunities represent fundamental drivers of HIV risk in transgender women in the LAC region.

New HIV Infections in Latin American and Caribbean Region (LAC)

According to the UNAIDS Global AIDS Update 2016 MSM and trans women are estimated to collectively represent one out of every three of all new infections of HIV in the LAC region.

Figure 2. New HIV Infections by Population Groups

Adapted from UNAIDS Global AIDS Update 2016

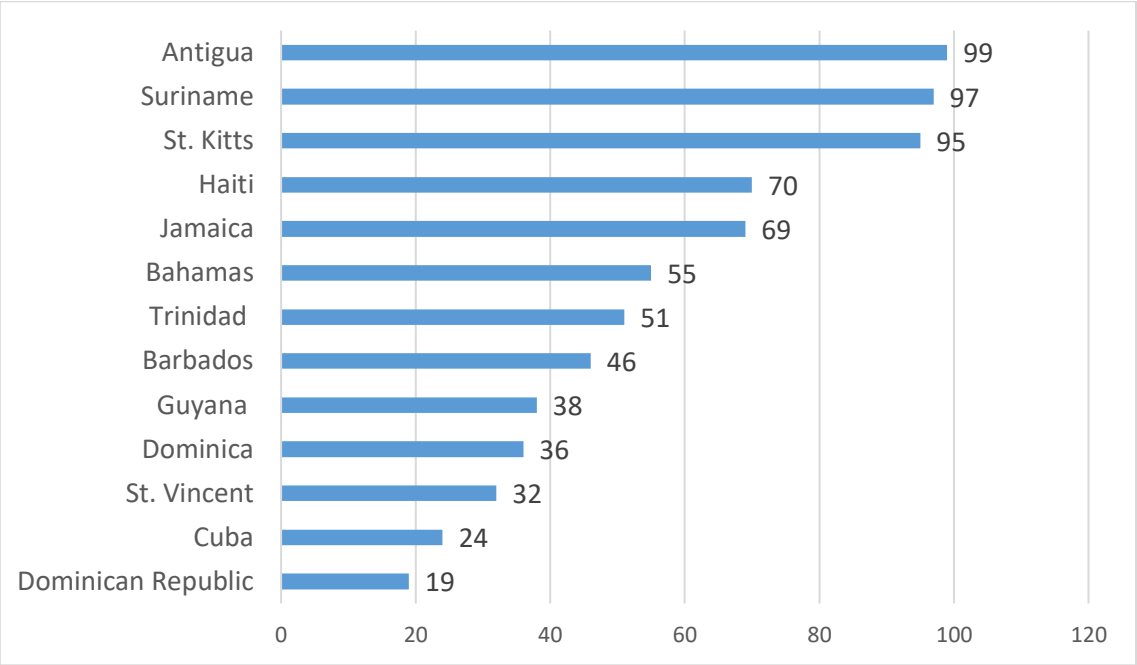


HIV Testing in MSM in the Caribbean

According to the GARPR Reports from 2011 to 2016, MSM HIV testing coverage in the Caribbean ranges from a low of 19% in the Dominican Republic to a high of 99% in Antigua and Barbuda.

Figure 3. MSM HIV testing coverage in the Caribbean

Adapted from GARPR Reports from 2011 to 2016



In the Caribbean overall a much greater proportion of females than males are coming forward for HIV testing. A comparative study among young people in the Caribbean reports a predominance of females testing ranging from 68% in Guyana to 82% in Haiti.[v] This has been associated with late onset of treatment for MSM and trans women in the LAC region (Barrington, Clare et al. 2018)[vi]

The HIV Epidemic in Belize and MSM and Trans Women

Belize has one foot in the Caribbean and another in Central America, giving the country a series of unique socio-cultural, political and geographical characteristics within the English speaking Caribbean. The historically shifting borders with Guatemala and Mexico, that today remain relatively permeable, inevitably link the country's HIV epidemic to that of Central America. This may be particularly true for MSM and Trans who in this study reported crossings the border to tap into a larger and more varied LGBT social and leisure scene beyond the eyes of family and friends.

In the first decade of the new millennium, Belize's HIV epidemic had the characteristics of a generalised epidemic with concentrated pockets primarily amongst MSM, trans women and female sex workers. During this time, Belize actually had the highest prevalence of HIV of the Central American Region (CAR) with a prevalence of 2.3% in the general population. Runners-up for second place lagged far behind with Panama and Guatemala tying with a prevalence of 0.8%.[vii]

By 2014, data confirmed that Belize's HIV epidemic had assumed the characteristics of a concentrated epidemic like the rest of CAR and the Caribbean, with a prevalence of 0.6% in pregnant women.[viii]
Belize benefited with the rest of CAR from support by the US Government to conduct bio-behavioural studies in key populations. In the study conducted in Belize, a prevalence of 13.85% was found in MSM.[ix] Nicaragua and Guatemala reported the lowest MSM prevalence rates in

CAR, each with 8.9%, and Panama the highest with 18.7%. The Belize study only succeeded in recruiting 136 eligible MSM participants across the countries six districts, and the number of trans women recruited was too small to report trans-specific data. In the other CAR countries trans women were found to have by far the highest prevalence in the region, ranging from 24% in Guatemala to 38% in Panama.[x]

There are no published studies on trans women and HIV in Belize, and only a single studied was identified in the grey literature. This consisted of a recent qualitative study involving some 20 trans women that is forthcoming, and was not available for consultation at the time of preparing this report.

Key highlights of The 2012 Belize MSM bio-behavioural study included:

- A 28% prevalence rate for herpes simplex II virus.
- The study reported that a 40.4% have had the sexual debut before the age of 15, and of these 8.0% reported that the sex had occurred against their will.
- A 98.8% reported knowing where to get an HIV test
- More than half of the sample (56.6%) reported having received an HIV test in the last 12 months and had received their result.
- A 55.12% reported using a condom the last time they had anal sex with a male partner
- Also, a 62% reported using a condom in last anal sexual encounter with a male partner
- Half the sample (50%) reported using a condom in last anal sexual encounter with a commercial partner (sex worker)
- About 70% reported using a condom the last time they had anal sex with a partner that paid them for sex.
- Over 50% reported having had sex with a woman at some point and 40% reported this has occurred in the last 12 months.
- A 30% reported using drugs in the 12 months preceding the survey (marijuana, cocaine, crack and ecstasy).
- Almost third of the sample (31.9%) reported having been forced to have sex against their will at some point
- The 9.6% reported being raped by another man within the 12 months prior to the survey

At the end of 2012 PASMO (Pan American Social Marketing Organization) and Population Services International (PSI) conducted a TRaC survey[xi] between Men who have sex with Men (MSM) in five cities of Belize (Belize City, Cayo, Orange Walk, Corozal Town and Stann Creek). A total of 282 MSM were recruited to take a survey which addressed issues related to HIV/AIDS, risk behaviours and determinants of condom use.[xii] The TRaC study found overall condom use, irrespective of partner type, to be higher for MSM than trans women (56.1% versus 42.7% respectively). In addition, it found a very low percentage of MSM who had an HIV test and received their results, with the highest percentages found in trans women (14.7%) and the lowest in MSM sex workers (4.6%). The results showed low overall experiences of MSM who reported feeling discriminated against when accessing HIV testing (1.6%). However it found considerably higher reporting amongst trans women and MSM sex workers (17.7% and 18.9%). Overall the TRaC study found MSM were able to correctly identify HIV transmission mechanisms

(80.3%), however significant subgroup differences were observed with MSM sex workers (73.3%) and in trans women (48.9%).

To compensate for the absence of incidence data in Belize, a Modes of Transmission Study was conducted in Belize in 2014 with the assistance of UNAIDS, to estimate HIV incidence. This study identified three groups with the highest estimated incidence of HIV:

- MSM were estimated to account for 63.5% of new cases of HIV transmission (range 48.8% – 75.6%),
- Persons engaged in casual heterosexual sex for 20.3% of new cases (range 10.2% – 35.7%)
- Stable Heterosexual couples for 8.4% (range 0.9% - 19.3%).[xiii]

As is the case in the rest of the Caribbean, overall females are coming forward for testing in much higher percentages than males. According to the latest Annual HIV Statistical Report in Belize, amongst the most sexually active age group (15 to 34) females where between 5.2 and 1.7 times more likely to have taken an HIV test in 2016 than males depending on any given age bracket.

Table 1. HIV Test by Age Group and Sex, Belize 2016

Adapted from Annual HIV Statistical Report

Age	Male	Female	Total	Percentage
15-19	627	3302	3929	12.96
20-24	1620	5281	6901	22.77
25-29	1691	4038	5729	18.90
30-34	1521	2643	4164	13.74

The report indicates that two of every three persons who tested positive for the sexually transmitted infection were males. Belize District had the highest numbers of new cases (67 males and 59 females diagnosed with HIV); whereas Toledo District had, the lowest number of new HIV cases (six males and four females).[xiv]

Throughout the Caribbean and Central America, non-disclosure of sexual orientation to healthcare providers has proved a major challenge for countries ability to report on MSM and trans individuals in health settings, and to characterise their treatment cascade. However, recent evidence suggests that although the barriers to disclosure by MSM are many, the majority of them are modifiable and could therefore be targeted to improve healthcare professionals' awareness of their patients' Sexual Orientation (Brooks, H et al 2018)[xv]

It is fundamental in the Caribbean that healthcare professionals be made fully aware of the broad range of factors that influence sexual orientation disclosure, and of the potential disadvantageous effects of non-disclosure on care. It is vital that the environment in which patients are seen is welcoming of sexual diversity as well as critical to ensure that healthcare professionals' communication skills, both verbal and non-verbal, are accepting and inclusive.

METHODOLOGY

Modifications to the Standard Methodology

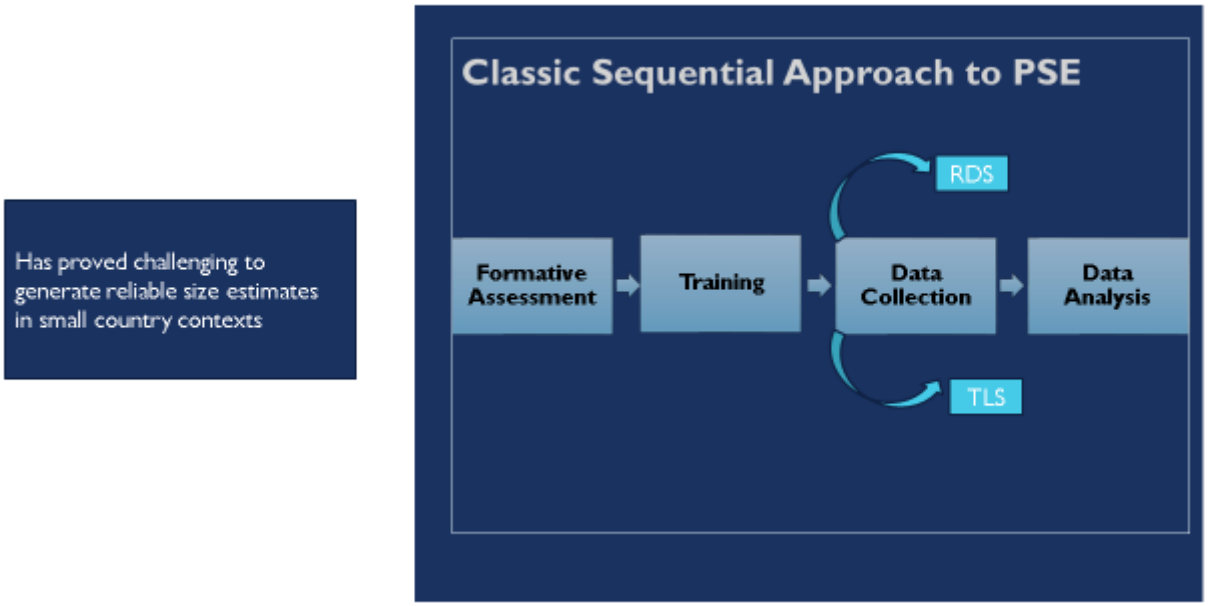
The overall approach to the methodology is based on tested and established methods used around the world, with a few specific adaptations and variations introduced by the Caribbean Vulnerable Communities Coalition (CVC) and the University of Alabama at Birmingham (UAB) to address the small island context of the Eastern Caribbean. Thus, although this study draws heavily on the pioneer work of Johns Hopkins University, and The University of California at San Francisco. Some specific modifications were introduced by CVC and UAB and are outlined below.

Inclusion of a Pre-Assessment Phase

The ***Pre-Assessment Phase*** took place between 18th and 22 October 2018, four months prior to the commencement of the data collection in Belize. This phase was introduced to inform the elaboration of the study's protocol and guide the overall planning of the study. The pre-assessment afforded us various advantages:

1. It allowed us to develop a study protocol in a timely manner, well in advance of the commencement of the data collection. This was important given the fact that the ethical review boards in small countries like Belize tend to meet less frequently and involve individuals with numerous "hats to wear".
2. It enabled us to delay a more detailed and district specific formative assessment until the months leading up to the commencement of the survey in each of the districts when the IRB approval was already secured. This meant that the qualitative data collected in the formative phase was officially covered by IRB approval. It also saved on travel costs for the CVC/UAB research team who only had to travel to Belize, initially for the pre-assessment and then return twice for each of the two fieldwork phases that took on three districts at a time for the formative phase and the survey phase.

Figure 4. Classic Sequential Approach to Undertaking Population Size Estimates



Front-Ending the Formative Phase to the Survey Implementation Phase

Consultations with representatives from the local authorities and local non-governmental organizations were held both during the pre-assessment phase and early in ***Formative Assessment Phase*** prior to initiating the survey, to identify potential sampling issues related to RDS, review study protocol, and to resolve study logistics. Study logistics discussed during the formative phase included the selection of survey sites, the resolution of confidentiality and safety issues, and identification of MSM and trans women that could be recruited as seeds. Delaying the formative phase was possible because much of the broader background and framing for the study — classically undertaken during the formative phase —was addressed during the pre-assessment phase.

Conducting the ***Formative Assessment*** just prior to, and overlapping with, the initiation of survey implementation yielded two important advantages.

1. Recruits could opt to participate in the qualitative data collection techniques as well as take the survey. Therefore, we were able to avoid the "interviewee fatigue," "double-exposure" and "loss to survey follow-up" associated with the traditional sequential and temporally spaced approach to programming the formative and survey phases. This modification was important in small population contexts like Belize, where the overall number of key populations (N) is very small, requiring a much larger percentage of them being recruited to the survey to obtain a valid sample size (n). In the greater San Francisco area of California where much of the initial work on PSE was perfected, there are very large numbers of MSM, and Trans women. This means that for conducting a PSE in MSM, for example, one can recruit an eligible MSM participant for a qualitative technique during the formative phase of the study and not worry if that participant is

ever re-captured again. This is because of the very large absolute numbers that make up the "N" in the greater San Francisco area; and consequently, the relatively small percentage of that "N" required recruiting to achieve a valid sample "n" for the survey. In the small Island context of Belize, the situation is very different and one does not have the luxury of "dispensable" participants between phases. Firstly, the overall numbers of MSM and trans women (N) are miniscule by comparison, requiring one to recruit a much larger percentage of the (N) to get a valid sample (n). Secondly, the highly stigmatized behaviours of MSM and trans women in Belize push these individuals underground and make them very reluctant to come forward to take part in a survey. Thirdly, the small population context makes confidentiality and keeping one's business private extremely challenging, and the risk of potential exposure for participants that much greater. Under these circumstances the need to capture participants during the formative phase and then again during the survey phase subjects them to additional risk of exposure, and can result in participant "fatigue" and potential loss of follow-up.

2. Due to the fact that the qualitative techniques associated with the formative phase were conducted after IRB approval was secured, relevant information and can be referenced in the study findings.

Bolstering Classic Respondent-Driven Sampling (RDS) with Indigenous Fieldworker Worker sampling (IFWS).

The traditional approach to PSE has been to use either respondent-driven sampling (RDS) or Time Location Sampling (TLS). During the pre-assessment phase and formative phase, we considered, and later discarded the possibility of using TLS. It proved very challenging for the fieldwork team to identify a range of time-location units to locate the members of the target populations. In the small population context of Belize (small overall numbers, highly stigmatized behaviours, and fear of exposure), existing venues are frequently mixed environments where it can be challenging to objectively identify and count members of the target population. When venues/sites are more segregated, they tend to be purposefully rather spontaneous and random in time, and itinerant in location, to help preserve privacy and provide greater safety. This set-up defies the establishment of a sampling framework made up of given time-location units in which eligible members of a population can readily be counted. Although TLS allows the surveying of informal venues — such as private homes — into the sampling frame; in practise, we found IFWS a more effective way of conducting the sampling in these informal sites.

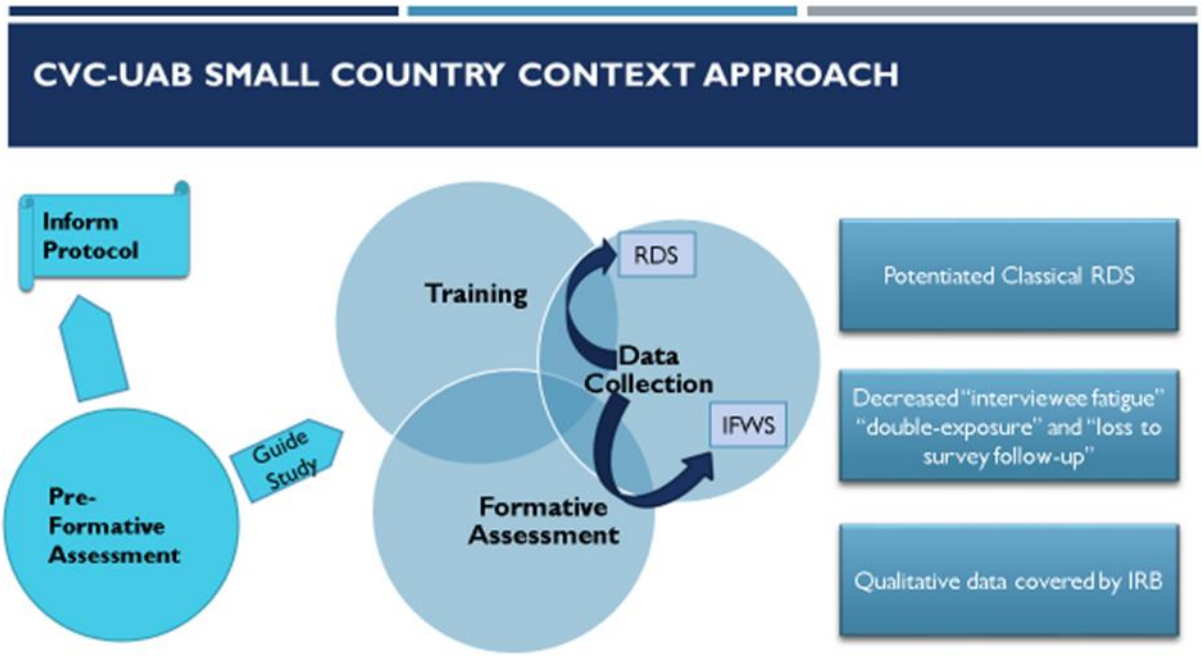
Classic respondent-driven sampling was by far the most commonly used sampling methodology used in the survey. RDS recruitment through peer-referrals allowed us to capture a myriad of hidden sub-groups (via seeds) that may not congregate at all, such as "Down Low" MSM or young MSM, using non-identifying codes to link enrolled participants to those to whom they refer in the survey, and collecting social network size data for statistical adjustments.

Indigenous Fieldworker Sampling (IFWS) is a variant of RDS that we used in specific circumstances such as to access particular Key Population Subgroups like down-low MSM or a high-end socio-economic class of MSM. IFWS has become a well-documented sampling method

for recruiting hidden populations internationally. It involves deploying 'privileged access interviewers' or 'indigenous field workers' to recruit sub-groups of MSM and trans women, from specific sub-groups or social settings. Indigenous field workers are essentially specially trained and supervised interviewers who are individuals belonging to these specific sub-groups or who have experience working or engaging with them. This gives them privileged access to particular strata of key populations. The IFWS recruitment method uses a standard RDS chain referral approach. Indigenous field workers were identified and carefully hand-picked from available seeds. They underwent additional training on top of the basic training that all interviewers underwent, which covered the aims of the study, fieldwork protocols, ethics, informed consent, interview skills and safety procedures. The Indigenous Field workers (IFWs) then identified and recruited individuals known to them from MSM, or trans women networks, and then interviewed them in specific community or social settings, separate from the rest of the research team but under the supervision of the lead researcher responsible for field work. Eligible participants were given an incentive to take part and asked to introduce their peers to the indigenous field worker.

This bolstered sampling approach involving the use of unique sites and diverse networks for participant recruitment ensured a wider coverage of the different sub-populations and a larger, more varied sample than past studies conducted in Belize.

Figure 5. CVC/UAB Small Country Context Approach



The Use of a Distinct Participatory Action Research Approach

Finally, the methodology builds on a distinct participatory action research approach perfected by the Caribbean Vulnerable Communities Coalition in numerous studies conducted over the last 7 years in the Caribbean and Central and Latin America. We established a steering committee in each country made-up of local authorities, civil society and other key stakeholders that served as a technical review group that worked with the research and field team to design and implement a transparent and well-documented process. Thus, we collectively adapted global PSE guidelines to the local context of the Caribbean and developed local operational definitions, which were more relevant and suitable to the region. We were able to develop strategies for non-venue-based key populations through these collaborative efforts between partners and with guidance and assistance from Civil Society partners and the National AIDS Commission of Belize. As a coalition of civil society organizations working with key populations in the areas of advocacy, human rights, and sexual and reproductive health, the Caribbean Vulnerable Communities Coalition has a special responsibility to enlist and train key population members and front-line service providers as experts and research partners. It also has a role to strengthen the organizational capacity of their community-based organizations (CBOs) in the logistics and financial management of the fieldwork. It is important to build capacity to collect, analyse and use PSE data. This benefits both the organizations and CVC, as we build a network of CBOs capable of acting as local fieldwork hubs, strategically placed and uniquely qualified to undertake cost-effective research in partnership with CVC and others.

Ethical Considerations

Pre-survey meetings were held with representatives from the National AIDS Commission of the Ministry of Health, civil society partners and other stakeholders to discuss ethical and confidentiality issues. The outcomes of these meetings were used to guide the planning and implementation of the survey. As per the protocol, respondents were informed that survey participation was confidential and voluntary, and that they could withdraw at any time during the survey process. Following careful explanation of the survey, staff obtained verbal consent from each eligible respondent. In order to receive compensation for participation, potential participants were informed that they had to agree to complete the behavioural interview.

Interviews were conducted in private and confidential settings to maintain anonymity. All survey data were stored in a confidential manner. No names, GPS locations, addresses or other personal identifiers were collected from participants. Questionnaires were linked to each participant only via a unique coupon identification code that enabled researchers to track branching patterns in respondent-driven sampling (RDS). The protocol and questionnaire were submitted for ethical review to IRB and approved by the ethical committee of the Ministry of Health in Belize.

Limitations

There is the possibility of a recruitment bias associated with respondent-driven sampling, the predominant sampling method in the study. A modest compensation for respondents is a crucial element of recruitment in RDS, but determining the appropriate amount for each unique population in a given country can be a tricky matter. With too much compensation, there is a risk that recruits fake eligibility requirements. If the amount is too low, recruitment will be sub-optimal. For the surveys in Belize, we made painstaking efforts to set compensation amounts based on meetings with local experts, and MSM, and Trans women in each of the districts both during the pre-assessment and formative research phases of the study. The first line of defence against fake respondents consisted of specially trained site supervisors with experience working with each of the populations who screened all recruits to ensure all respondents met eligibility criteria. The survey itself had a number of built in mechanisms to detect potential instances of recruiters posing as key population members. These included the same questions being asked in different ways and sequences; alerts of deliberate selection of skip patterns by respondents; conflicting or contradictory responses throughout the data set, and mismatches between GPS and chronologic data recorded by the tablet and that reported in the survey. All surveys were individually scrutinized by the lead researcher responsible for the fieldwork, to verify the eligibility of the completed questionnaire. It should also be pointed out that given the relatively small overall numbers of these populations in Belize it was not difficult to prevent repeat respondents and corroborate validity via the respondent-driven sampling branching patterns.

There is also a potential for the underreporting of risky sexual practices and drug use behaviours associated with self-reported, face-to-face interview, on account of a ***social desirability bias***. Participants being able to request the interviewer pass them the tablet to complete sensitive questions without the interviewer seeing mitigated this.

Certain questions might be subjected to recall bias as respondents were asked to recall periods of up to twelve months when responding to some questions.

Although every effort was made to ensure that the sample was representative of the network of the population from which respondents were recruited, the network may be missing important subgroups. For instance, down low MSM from higher socio-economic brackets may not form strong network ties with other MSM and may have small, closed networks not amenable to RDS.

There are numerous limitations to the size estimates of each of the groups, which are based on national country estimates. Actual numbers may be higher or lower in specific localities. Since these estimates are dependent on the availability of data, it is not yet possible to produce robust estimates for each locality. One example of this type of limitation is represented in the estimates for the three remoter districts of Corozal, Stann Creek and Toledo, due to inadequate local data. The remote districts have not benefited to the same degree as the other districts from MSM and Trans Women outreach programmes. Operating in these districts is costlier and more time

consuming due to the lack of infrastructure and transportation costs, and there are less developed social networks of MSM and Trans Women. In the remote districts, we are more likely to have tapped into a limited existing network of MSM and Tran Women known to the organisations that have started to do outreach in these areas (e.g. Belize Family Life Association) thanks to funding made available through the country's Global Fund grant. This might explain why the respondents in these remoter districts tended to be relatively well informed and report accessing prevention services. However, the situation might be quite different outside of the fledgling networks that are only now beginning to develop. It would be particularly important for follow-up studies to continue to monitor these districts as prevention outreach and networks are expanded.

GENERAL SURVEY RESULTS

Socio-demographic Profile

Age

The survey sample contained an age spread made-up of 43.7% of the sample being between the ages of 16 to 24; 45.4% between the ages of 25 and 40; and 10.9% being 41 years old or older. Belize district had the highest percentage of respondents between 16 and 24 years of age (50.4%); the 3 remote districts (referred to as "others" in the data tables) of Corozal, Stann Creek and Toledo, had the highest percentage of respondents between 25 and 40 years (56.3%), and Cayo recorded the highest percentage of respondents over 41 years of age.

Table 2. Respondent Age by District

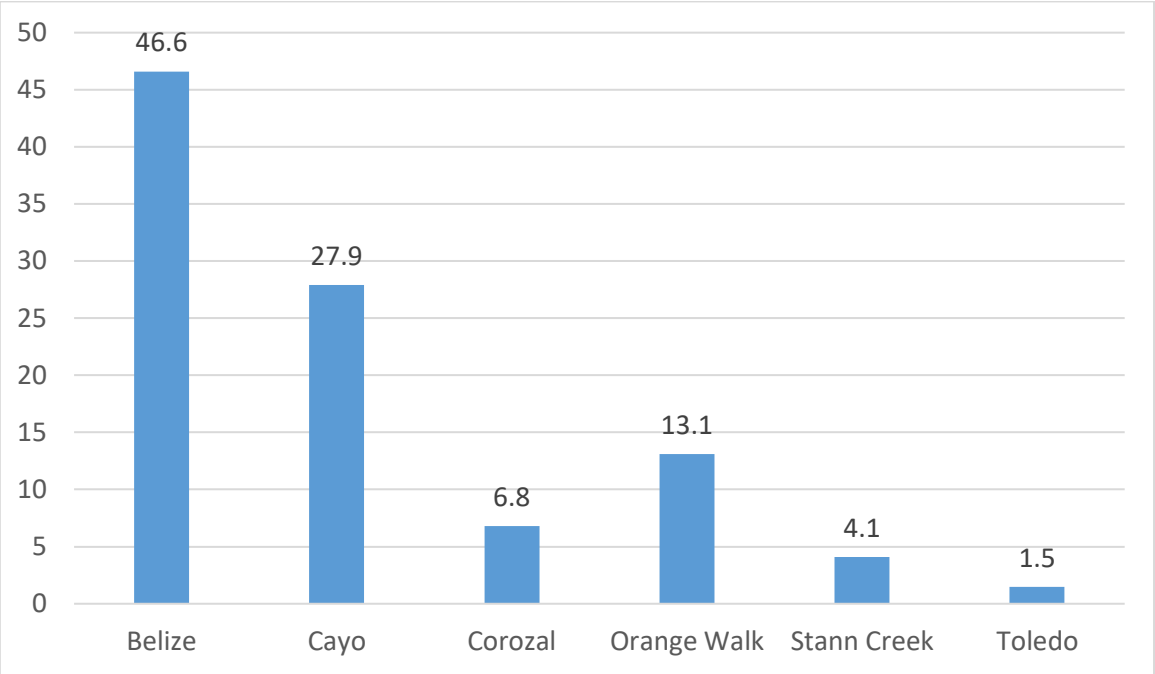
Note: Others refers to the remote northern and southern districts of Corozal, Stann Creek and Toledo.

		District				
		Belize	Cayo	Orange walk	Others	Total
Age	16-24 years old	269	114	65	53	501
		50,4%	35,6%	43,3%	37,3%	43,7%
	25-40 years old	218	153	69	80	520
		40,8%	47,8%	46,0%	56,3%	45,4%
	41 and more years old	47	53	16	9	125
		8,8%	16,6%	10,7%	6,3%	10,9%
Total		534	320	150	142	1146
		100,0%	100,0%	100,0%	100,0%	100,0%

Residence

Over 90% of the sample indicated living in Belize for at least for 5 years and the majority for their entire life (93.7%). Over 45% of respondents resided in Belize district (46.6%); almost 30% in Cayo district (27.9%); 13% in Orange Walk (13.1%); and 12% in the remote northern and southern districts of Corozal, Stann Creek and Toledo.

Figure 6. Respondent Residence by District



Religion

Over 40% of respondents reported being Protestant (41.5%); 43.5% Roman Catholic; whilst other religious affiliations such as Muslim, Baha'i, Rastafarian and Mennonite collectively made up just 1% of respondents. 8% of respondents reported having no religious affiliation. A comparison of religious affiliation across districts, for the two most cited religions, reveals that Catholicism was most prominent in Orange walk (55.7%) and Protestantism in Belize district.

Table 3. Religious Affiliation by District

Note: None refers to no religion at all.

		District				
		Belize	Cayo	Orange walk	Others	Total
Religion in which was raised	Roman Catholic	195	149	83	71	498
		37,6%	47,5%	55,7%	50,4%	44,4%
	Prostestant	276	145	58	53	532
		53,3%	46,2%	38,9%	37,6%	47,4%
	None	47	20	8	17	92
		9,1%	6,4%	5,4%	12,1%	8,2%
Total		518	314	149	141	1122
		100,0%	100,0%	100,0%	100,0%	100,0%

When respondents were asked whether they currently practiced a religion, 42.1% replied yes, and 57.8% no. Orange Walk had the highest percentage of respondents who don't currently practise any religion.

Table 4. Practising a Religion by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Do you currently practice a religion?	No	315 59,1%	168 52,5%	107 71,3%	72 51,1%	662 57,9%
	Yes	218 40,9%	152 47,5%	43 28,7%	69 48,9%	482 42,1%
Total		533 100,0%	320 100,0%	150 100,0%	141 100,0%	1144 100,0%

Older Respondents (41 years old and over) were more likely to report currently practising a religion than younger (16 to 24 years old).

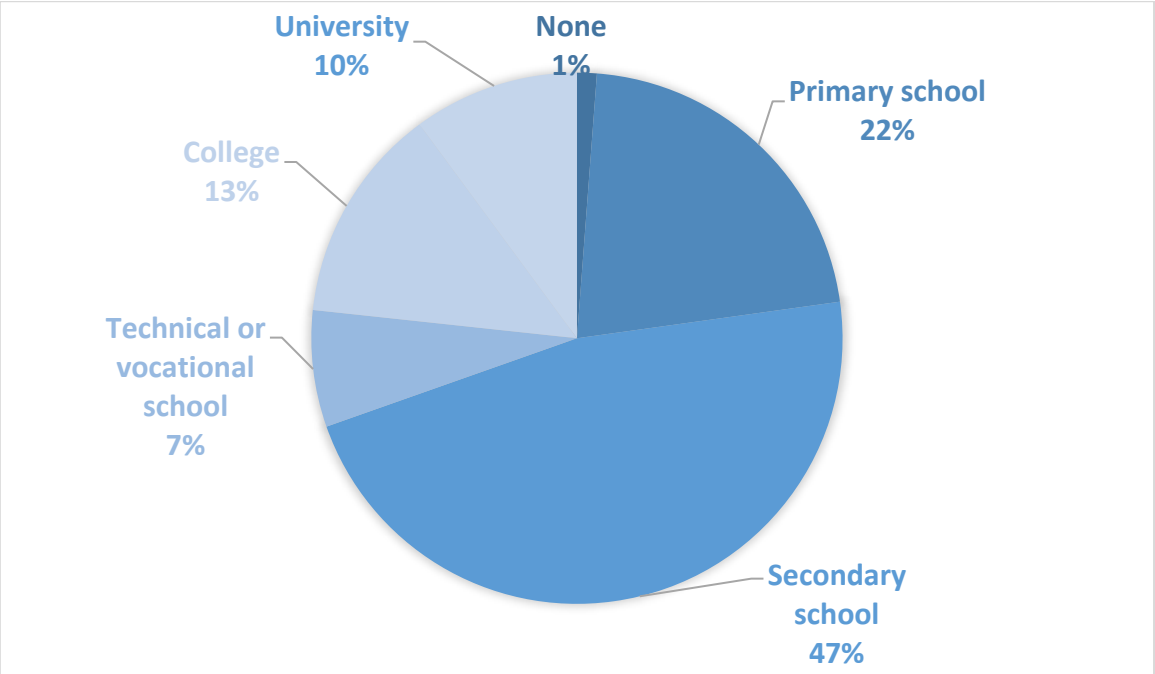
Table 5. Practising a Religion by Age

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Currently practice a religion	Yes	200 40,0%	207 39,9%	75 60,0%	482 42,1%
	No	300 60,0%	312 60,1%	50 40,0%	662 57,9%
Total		500 100,0%	519 100,0%	125 100,0%	1144 100,0%

Educational Level

Just over 20% of respondents reported having completed primary school (21.6%); almost half secondary school (46.8%); under a quarter had technical or vocational training (23.3%), and 10% university training (10.1%).

Figure 7. Highest Educational Level Attained



The lowest levels of educational attainment were reported in Orange Walk district, whilst the highest levels of educational achievement were reported in Cayo (82.8%).

Table 6. Highest Educational Level Attained by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Level of education competed	Lowest	120	55	53	34	262
		22,5%	17,2%	35,3%	23,9%	22,9%
	Highest	414	265	97	108	884
		77,5%	82,8%	64,7%	76,1%	77,1%
Total		534	320	150	142	1146
		100,0%	100,0%	100,0%	100,0%	100,0%

Older respondents were more likely than younger respondents to have attained only a lower educational level.

Table 7. Educational Level Attained by Age Group

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Level of education competed	Lowest	119	105	38	262
		23,8%	20,2%	30,4%	22,9%
	Highest	382	415	87	884
		76,2%	79,8%	69,6%	77,1%
Total		501	520	125	1146
		100,0%	100,0%	100,0%	100,0%

Employment

A 15% reported being currently unemployed. Just over 40% of respondents reported being employed by the private sector (41.4%); just under 20% by the public sector (19.0%); 14% reported being self-employed; 11.0% worked in the informal sector; and almost 6% reported their income came from sex work or transactional sex (5.8%). About 10% indicated that they were currently not working on account of their full time student status (10.4%).

Of those gainfully employed, 7.2% reported being paid daily, almost 40% (38.6%) weekly, 24.0% biweekly, and 8.1% monthly. Just under 10% reported being paid on an occasional basis (9.5%).

Note: Current Employment Status was a multiple-answer question so percentages add up to more than 100%.

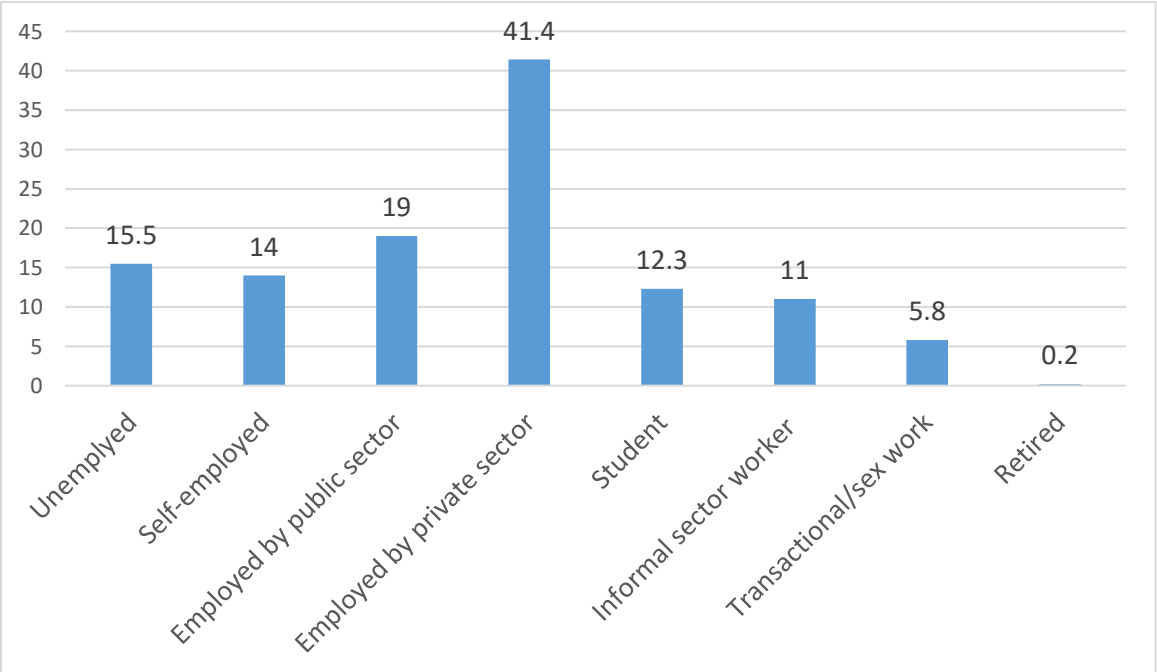


Figure 8. Current Employment Status

Income

The minimum wage stipulated by law in Belize is currently at BZ$3.30 and has not been adjusted since 2012[xvi]. A normal working week is considered 45 hours, thus, at the current minimum wage of BZ$3.30, this represents about BZ$148.50 per week or BZ$594 monthly. However, it has been widely acknowledged in Belize that it is impossible to live in urban Belize with this level of income.[xvii]

Almost a quarter of respondents reported earning close to or below the legal minimum wage in Belize. The majority of respondents earned between BZ$651 and BZ$1599 (45.7%), and less than 1% earned over BZ$5,000.

Table 8. Current Employment Status

Average monthly income in BZ Dollars	Percentage of Respondents
No Income of my Own	9.1%
Income of less than BZ$650	24.5%
BZ$651 - BZ$1599	45.7%
BZ$1,600 - BZ$3,000	15.4
BZ$3,001 - BZ$5,000	3.8%
> BZ$5,000	0.8%

Using the following categories, monthly incomes were classified into lowest range (BZ $650 or less), middle range (BZ $651- BZ $1599), and highest range (BZ $1600 and above). Based on this classification, a third of respondents fall within the lowest income range (33.6%), 45.7% in the middle range and about a fifth in the highest range (19.9%). Income disparities were registered across districts, with the highest percentage within the lowest range residing in Orange Walk and within the highest range in Belize district.

Table 9. Monthly Income Range by District

		District				
		Belize	Cayo	Orange walk	Others	Total
About how much money do you earn per month in BZ dollars?	Lowest income	186	84	73	42	385
		35,0%	26,7%	48,7%	29,8%	33,9%
	Middle income	220	174	47	83	524
		41,4%	55,2%	31,3%	58,9%	46,1%
	Highest income	125	57	30	16	228
		23,5%	18,1%	20,0%	11,3%	20,1%
Total		531	315	150	141	1137
		100,0%	100,0%	100,0%	100,0%	100,0%

Almost half of younger respondents 16 to 24 years old reported being within the lowest income range (49.2%), whereas the older respondents (>40%) were 16.75 times more likely than the younger respondents to fall within the highest income range.

Table 10. Monthly Income Range by Age

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
About how much money do you earn per month in BZ dollars?	Lowest income	244	112	29	385
		49,2%	21,7%	23,2%	33,9%
	Middle income	219	259	46	524
		44,2%	50,2%	36,8%	46,1%
	Highest income	33	145	50	228
		6,7%	28,1%	40,0%	20,1%
Total		496	516	125	1137
		100,0%	100,0%	100,0%	100,0%

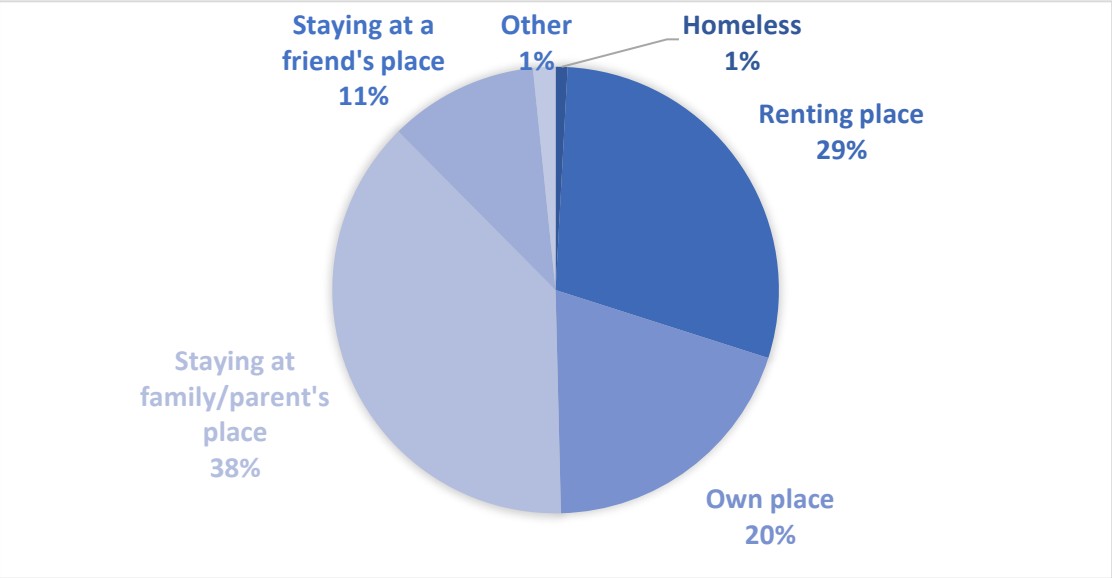
During the data analysis workshop held in country with key stakeholders, participants were interested in looking at how low income status might impact a series of variables such as sexual and physical abuse, HIV testing and condom use. Therefore, we ran some multivariate analysis to see whether any tendencies emerged. The only two statistically significant findings that became apparent were:

1. Respondents that reported a history of being forced to have sex against their will and reported never having had an HIV test, were far more likely to belong to the lowest income bracket (13.4%) when compared to those belonging to middle and higher income brackets (7.6% and 8.1% respectively).[xviii]
2. Respondents that reported having unprotected anal sex in the last 3 months and reported never having had an HIV test, were far more likely to belong to the lowest income bracket (45.1%) when compared to those belonging to middle and higher income brackets (27% and 17.4% respectively).[xix]

Living Arrangement

In terms of living arrangements, the majority of respondents reported living with relatives (39.7%), followed by renting a place (30.4%), owning a place (20.6%), and staying at a friend's place (13.1%). Just under 1% indicated having a number of other arrangements including school dormitory, military barracks, government housing and work place. About 1% of respondents indicated that they had no set place to live or where homeless.

Figure 9. Current Living Arrangement



When asked about who they share their living space with the majority of respondents reported living alone (42.85) or with relatives (35.9%). 8.0% lived with a male partner and 4.6% with a female partner. 5.4% reported they lived with children, and 11.6% shared their living space with friends.

Note: Living Space Shared with was a multiple-answer question so percentages add up to more than 100%.

Table 11. Who Respondents Share Living Space With

Living Space Shared With	Percentage
Live alone	42.8%
With male partner	8.0%
With female partner	4.6%
With relatives	35.9%
With friends	11.6%

With children	5.4%

The highest percentage of respondents who reported living alone resided in Cayo (48.4%) followed by Belize district (43.8%).

Table 12. Percentages of Respondents Reporting Living Alone by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Live alone	Yes	234	155	47	54	490
		43,8%	48,4%	31,3%	38,0%	42,8%
	No	300	165	103	88	656
		56,2%	51,6%	68,7%	62,0%	57,2%
Total		534	320	150	142	1146
		100,0%	100,0%	100,0%	100,0%	100,0%

Older respondents (>41 years) where almost twice more likely than younger respondents (16 – 24) to have reported living alone.

Table 13. Percentages of Respondents Reporting Living Alone by Age

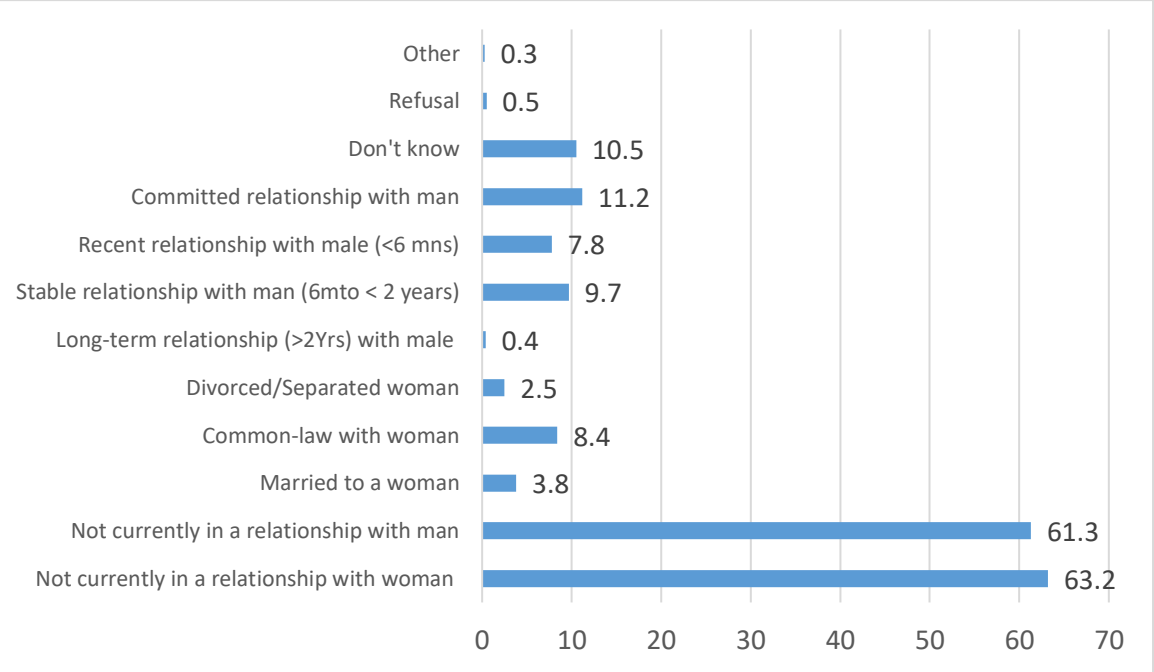
		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Live alone	Yes	154	264	72	490
		30,7%	50,8%	57,6%	42,8%
	No	347	256	53	656
		69,3%	49,2%	42,4%	57,2%
Total		501	520	125	1146
		100,0%	100,0%	100,0%	100,0%

Civil and Relationship status

The majority of respondents reported not currently being in a committed relationship with either a man (61.3%) or a woman (63.2%). 12.2% reported being in a formal relationship with a woman, whether common law or married; 2.5% indicated being separated or divorced from a woman. Of men who reported being involved with a man, 7.8% reported being in a recent relationship (less than 6 months), 9.7% in a stable relationship (between 6 months to 2 years), and 0.4% in a long-term relationship (over 2 years). A 11% specifically stated the committed nature of their relationship irrespective of its duration.

Note: Current Civil/Relationship Status was a multiple-answer question so percentages add up to more than 100%.

Figure 10. Current Civil/ Relationship status



Biological Children

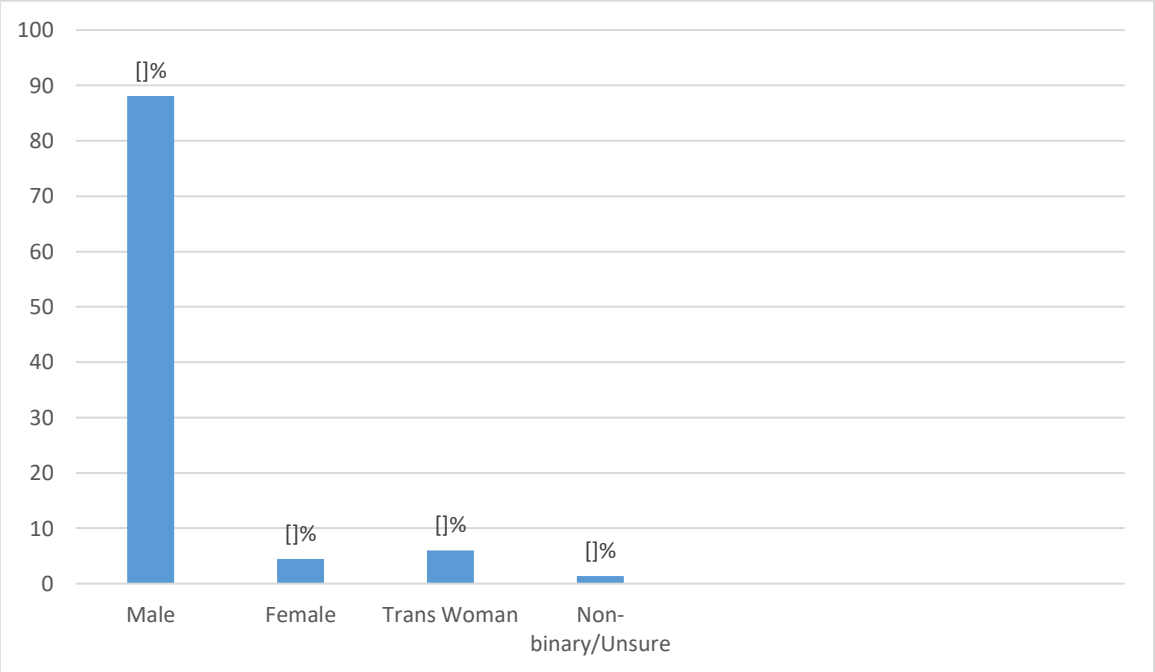
When asked about biological children, over 75% indicated not having any children (76.2%). Of those who had fathered children, 15.7% indicated having between one and two children, 5.6% between three and four, and 1.2% five or more biological children.

Gender identity

The vast majority of participants identified as male (88.1%); however, 4.5% identified as female; 6% as transgender; and about a further 1% identified with a series of labels that encompass identification with both male and female genders (both male and female, cross dresser, gender fluid, non-binary). A further 11.2% defined their gender identity as other than male and female, or were unsure how to define it.

Figure 11. Gender Identity

Note: Under the non-binary category, participants either identified themselves as such or as gender fluid.



When comparing gender identity across districts we observe that respondents in Belize district and Cayo district were more likely to identify as male than respondents in other districts (92.6%). Orange Walk had the highest percentage of respondents in any single district to identify as transgender.

Table 14. Gender Identity by District

		District				
		Belize	Cayo	Orange walk	Others	Total
What do you consider your gender to be: male, female, trans or other?	Male	490	287	125	108	1010
		92,6%	92,6%	83,9%	76,1%	89,4%
	Female	19	15	4	13	51
		3,6%	4,8%	2,7%	9,2%	4,5%
	Trans	20	8	20	21	69
		3,8%	2,6%	13,4%	14,8%	6,1%
Total		529	310	149	142	1130
		100,0%	100,0%	100,0%	100,0%	100,0%

Sexual Orientation

Regarding sexual orientation, the majority of respondents identified as gay or homosexual (52.8%); 29.1% as bisexual; almost 10% as straight or heterosexual (9.7%); transgender attracted to men (6.3%), and transgender attracted to both men and women (1.1%).

Figure 12. Sexual Orientation

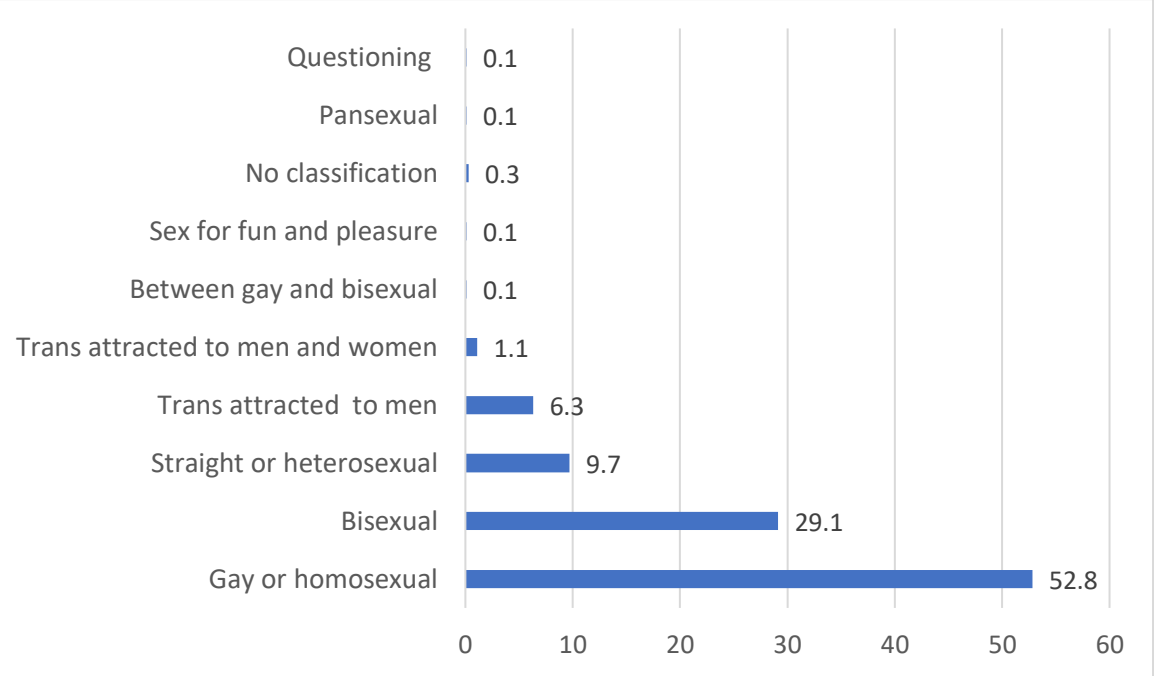
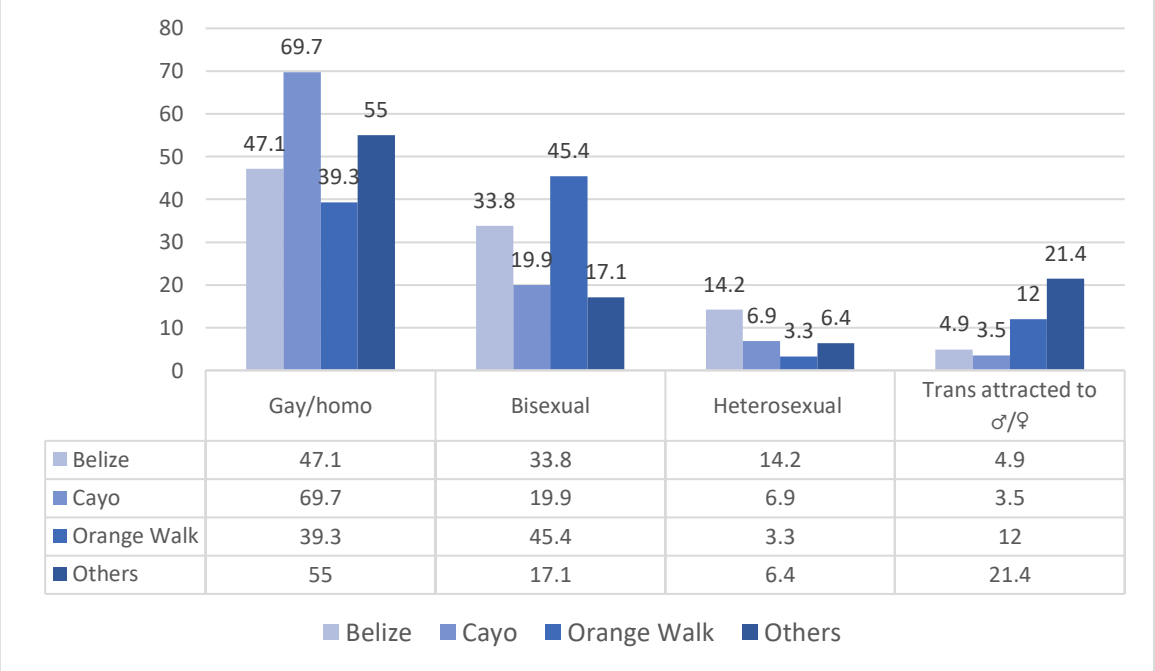


Figure 13. Sexual Orientation by District

Cayo district had the highest percentage of respondents identifying as gay or homosexual (69.7%); Belize district, the highest percentage of those identifting as heterosexuai; and Orange

Walk, the single district with the greatest percentage identifying a transgender, whether attracted to men, or to men and to women.



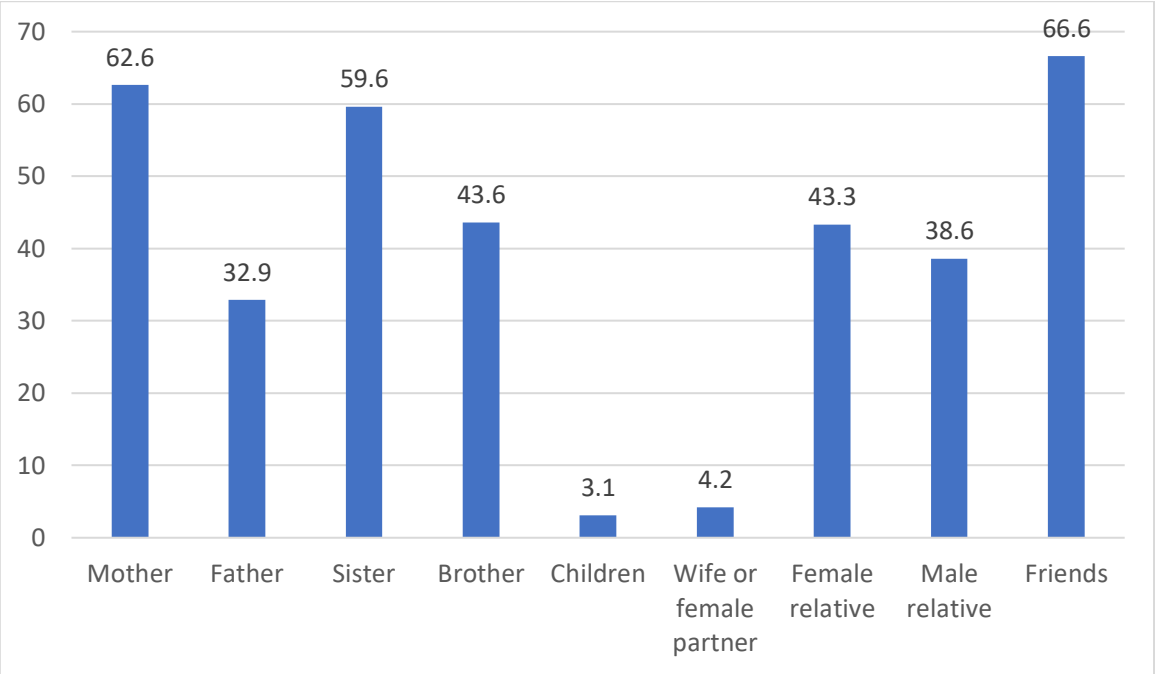
Disclosure

Respondents were asked whether they had voluntarily told any member of their family about having sex with men, 56.5% responded affirmatively; 43.4% reported that they had not disclosed to anyone in their family.

Those who had disclosed were asked specifically whom they had voluntarily disclosed to. Overall, disclosure was more likely with friends than family; Respondents were more likely to have told a female over a male relative, and a close relative (mother or sister) other than father, over a distant relative. Very few had disclosed to their children, wife or a female partner. No significant differences (p>0,05) between districts was observed regarding disclosure.

Figure 14. Relationship to Person Respondent Disclosed to

Note: Relationship to Person Respondent Disclosed to was a multiple-answer question so percentages add up to more than 100%.



Sexual Behaviour

Sexual Debut

The average age of sexual debut was 14.7 years (range: 3 to 27 years old, mode 15).
The majority of participants reported a sexual debut between the ages of 11 and 15 years of age (58.3%). 6.9% had their first sexual act at 10 years or younger; and about a third indicated they were 16 years or older (34.3%) before having sex for the first time.

Belize district reported the highest percentage of respondents initiating sex at 10 years or less (8.1%); the remote districts (Corozal, Stann Creek and Toledo) the highest percentage of respondents initiating sexual behaviour between the ages of 11-15 years (70.2%); and Orange Walk district reported the highest percentage of respondents with a sexual debut of 16 years old or older (51.3%).

Table 15. Age of Sexual Debut by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Age when first sexual episode	10 years old and less	43	25	7	4	79
		8,1%	7,9%	4,7%	2,8%	6,9%
	11-15 years old	291	212	66	99	668
		54,8%	66,7%	44,0%	70,2%	58,6%
	16 and more years old	197	81	77	36	393
		37,1%	25,5%	51,3%	27,0%	34,5%
Total		531	318	150	141	1140
		100,0%	100,0%	100,0%	100,0%	100,0%

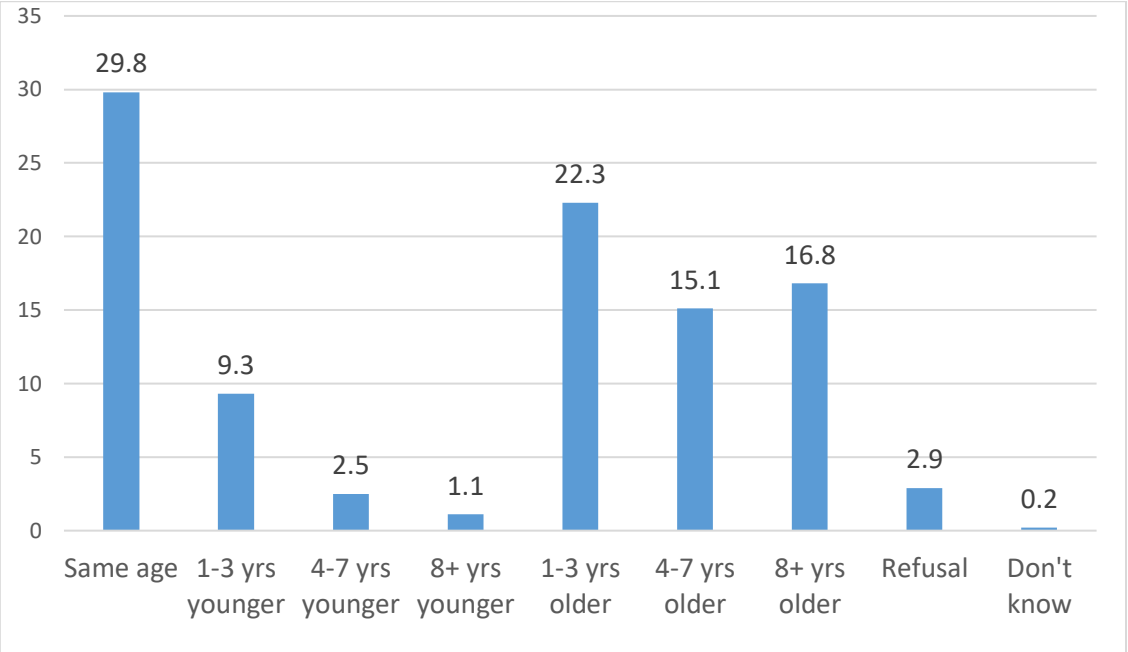
Respondents were asked about whether their first sexual act was consensual or not. An 88.0% indicated that it was; however almost 10% indicated that it was not (9.0%) and 3.0% were not sure. Non-consensual sex in first sexual act was highest in the remote southern and northern districts of Corozal, Stann Creek and Toledo.

Table 16. Consensual Sexual Debut by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Voluntarily agreed first sexual episode	Yes	471	283	136	118	1008
		91,5%	91,6%	90,7%	86,1%	90,7%
	No	44	26	14	19	103
		8,5%	8,4%	9,3%	13,9%	9,3%
Total		515	309	150	137	1111
		100,0%	100,0%	100,0%	100,0%	100,0%

The age differential between the respondent and the person they first had sex with is presented in the figure below. Less than a third of respondents (29.8%) had sex with someone of the same age, and more than half (54.2%) had sex with someone older than them. Of those with an older sexual partner, 16.8% initiated sex with someone over eight years older.

Figure 14. Age Differential with Sexual Partner during First Sexual Act



Respondents were asked about the biological sex of the person they first had penetrative sex with (whether vaginal or anal); two third of respondents reported this to be another male (66.8%), and the remaining third a female (32.6%).

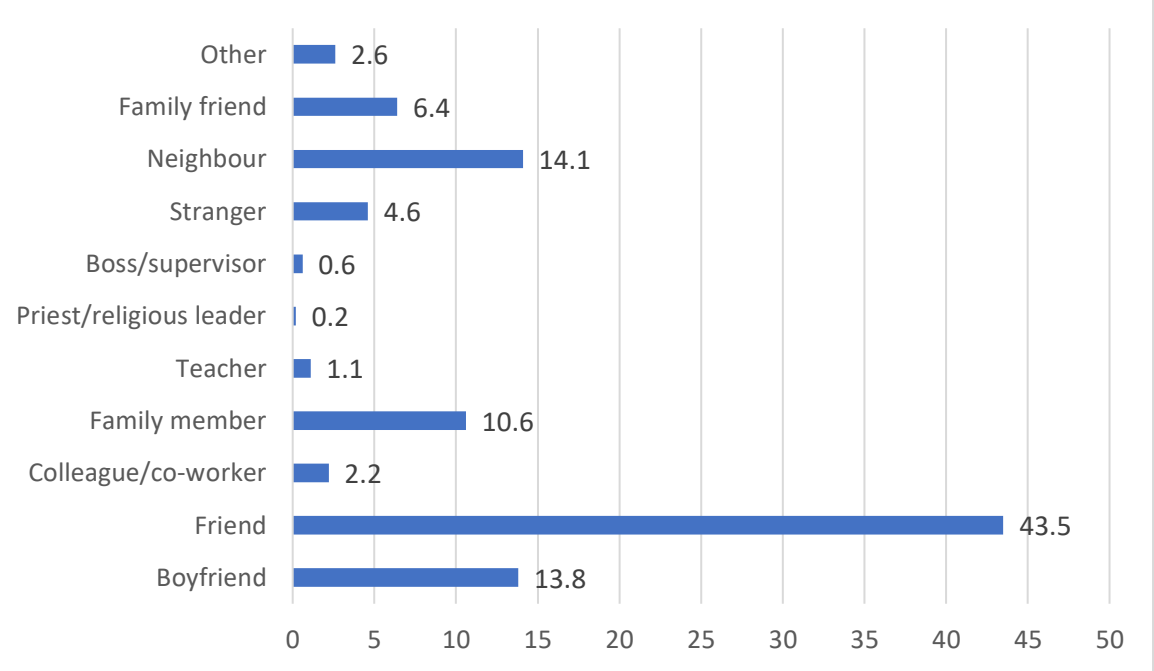
A series of questions asked specifically about the first male partner respondents had anal sex with. The average age for first anal sex with another male was 16.7 years old (range between 4 years and 39 years of age, with a mode of 16). Orange walk and the remote districts (Corozal, Stann Creek and Toledo) had a lower percentage of respondents who had anal sex with a male for the first time at age 10 or younger.

Table 17. Age of First Anal Sex with a Man by District

		District				
		Belize	Cayo	Orange walk	Others	Total
How old when first anal sex	10 years old and less	19	12	2	2	35
		4,1%	4,7%	1,4%	1,9%	3,6%
	11-15 years old	131	81	50	48	310
		28,2%	31,9%	34,5%	44,4%	31,9%
	16 years old and more	314	161	93	58	626
		67,7%	63,4%	64,1%	53,7%	64,5%
Total		464	254	145	108	971
		100,0%	100,0%	100,0%	100,0%	100,0%

In terms of the respondent's relationship with the first male they had anal sex with, the majority indicated it to be a friend (43.5%). However, it should be noted that 10.6% indicated that it was a family member.

Figure 15. Relationship to Male Partner of First Anal Sex

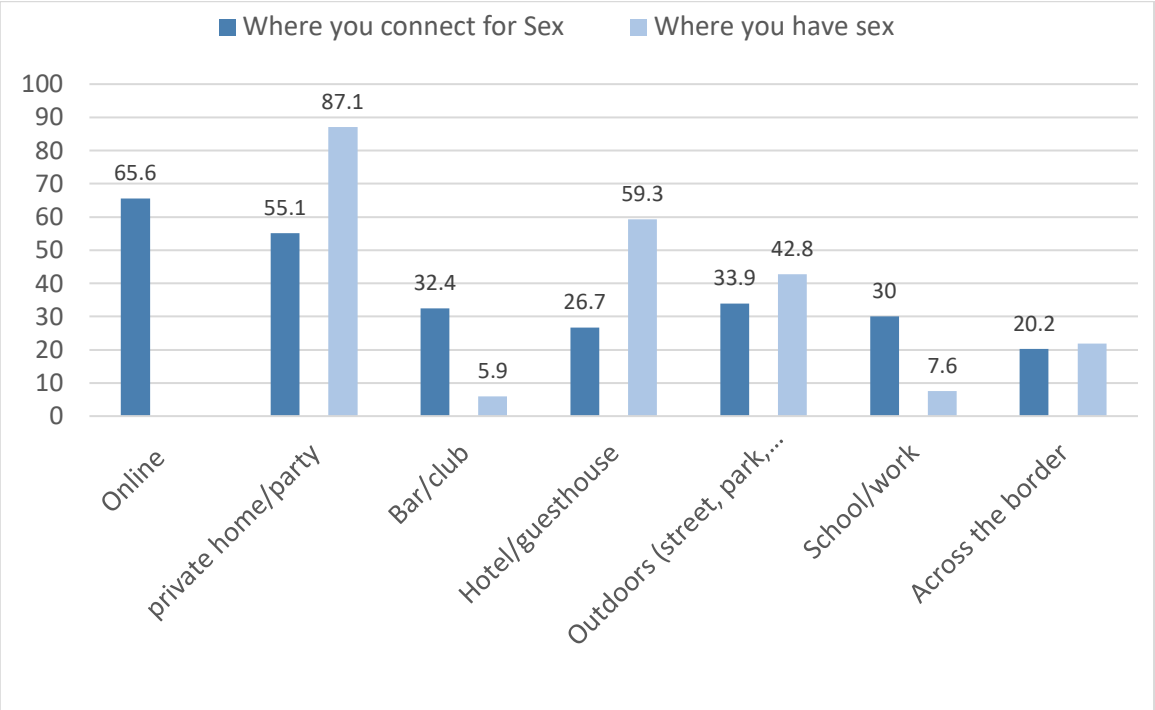


Places Where MSM/Transwomen Connect for and Have Sex

Popular places to connect for sex (dark blue columns in figure below) include online, private homes, hotels and outdoor settings. Connecting in bars, work or school settings and across the border are also mentioned but less frequently. In terms of where the sex itself actually occurs (light blue columns) similar settings are sighted, with private homes (87.1%), hotels/guesthouses (59.3%) and outdoor settings (42.8%) being the most cited locations.

Figure 16. Places MSM and Transwomen Connect for and have Sex

Note: Places MSM and Transwomen Connect for and have Sex were multiple-answer questions so percentages add up to more than 100%.



Sexual practices and Condom Use with Sexual Partners

Male and sex partners of MSM and Transwomen can be categorized to consider different sexual practices and condom use with each of the different types of male and female sexual partners. In this study, the term ***Main Male Sex Partner*** was defined as someone the respondent had sex with that they consider to be the person(s) they are serious about. It is noteworthy that 73% of respondents indicated they had more than one main partner, including both male and female main partners, in the last 3 months. A ***Casual Male Sex Partner(s)*** referred to anyone the respondent had sex with that they did not consider to be a main partner, other than *a* ***Paying Sex Male Partner(s)***, who is a partner that pays the respondent for sex, or a ***Male Sex Worker Partner(s)***, that the respondent pays for sex. Similarly, female partners of MSM and Transwomen can be Main, Casual, Paying or Sex Worker partners. This section considers general data about male sexual partners in relation to sexual practises. To avoid cumbersome repetition of the distinction between MSM and transwomen sexual partners throughout the section we will use the term ***biological male sexual partner*** to encompass both MSM and Transwomen sexual partners. Paying Partners are considered separately in a section specifically on Sex Work.

We begin considering data collected generally about male sexual partners in relation to oral and anal sex. We then consider specific sexual practices and condom use with the different sub-types of male sexual partners outlined above. A similar presentation is then followed for data relating to female sexual partners.

Biological Male Sexual Partners Overall

Oral Sex

The 65.2% of respondents reported having oral sex with another biological male in the last 12 months, and 22% reported using a condom in doing so. Almost 50% of respondents reported never using condoms during oral sex (49.1%). A 16.6% reported only ever receiving oral sex, 11.3% reported only giving oral sex, and 53.6% of respondents reported both giving and receiving oral sex to a biological male partner. Almost 50% of respondents reported never using condoms during oral sex (49.1%).

Belize district had the highest percentage of respondents who reported being the recipient partner only in oral sex (i.e. not performing oral sex on others).

Table 18. % Respondents Receiving but not Giving Oral Sex

		District				
		Belize	Cayo	Orange walk	Others	Total
I only allow men/trans to do oral sex on me	Yes	103 19,3%	55 17,2%	20 13,3%	12 8,5%	190 16,6%
	Not selected	431 80,7%	265 82,8%	130 86,7%	130 91,5%	956 83,4%
Total		534 100,0%	320 100,0%	150 100,0%	142 100,0%	1146 100,0%

Respondents from Orange walk were considerably less likely than respondents in other districts to have reported both giving and receiving oral sex, whilst Cayo district respondents were considerably more likely to have reported both giving and receiving oral sex with their biological male partners.

Table 19. % of Respondents Reporting both Receiving & Giving Oral Sex

		District				
		Belize	Cayo	Orange walk	Others	Total
I both give and receive oral sex from men/trans	Yes	280 52,4%	194 60,6%	57 38,0%	83 58,5%	614 53,6%
	Not selected	254 47,6%	126 39,4%	93 62,0%	59 41,5%	532 46,4%
Total		534 100,0%	320 100,0%	150 100,0%	142 100,0%	1146 100,0%

Anal Sex

Respondents reported a lifetime prevalence of anal sex with another biological male (MSM or Transwoman) of 87.1%. Respondents residing in Orange Walk reported a higher life-prevalence of anal sex with another biological male than respondents in other districts (94.7%)

Table 20. % of Respondents Reporting ever having had Anal Sex with a Man by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Have anal sex with men/trans	Yes	454	279	142	123	998
		86,5%	91,2%	94,7%	91,1%	89,4%
	No	71	27	8	12	118
		13,5%	8,8%	5,3%	8,9%	10,6%
Total		525	306	150	135	1116
		100,0%	100,0%	100,0%	100,0%	100,0%

An 80% of respondents reported having anal sex with another biological male in the last 12 months. Respondents in Cayo district reported the highest percentage of anal sex in the last 12 months compared to other districts, whilst Belize district respondents reported the lowest percentage of anal sex over the last 12 months of any district.

Table 21. % of Respondents having had Anal Sex with a Man in last 12 Months by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Have had anal sex last 12 months	Yes	287	270	92	98	747
		53,7%	84,4%	61,3%	69,0%	65,2%
	Not selected	247	50	58	44	399
		46,3%	15,6%	38,7%	31,0%	34,8%
Total		534	320	150	142	1146
		100,0%	100,0%	100,0%	100,0%	100,0%

The 64.8% of all respondents reported using a condom the last time they had anal sex with a biological male. Respondents in Cayo district reported a higher percentage of condom use during last anal sex than in other districts (79.9%); and Orange Walk the lowest (64.1%).

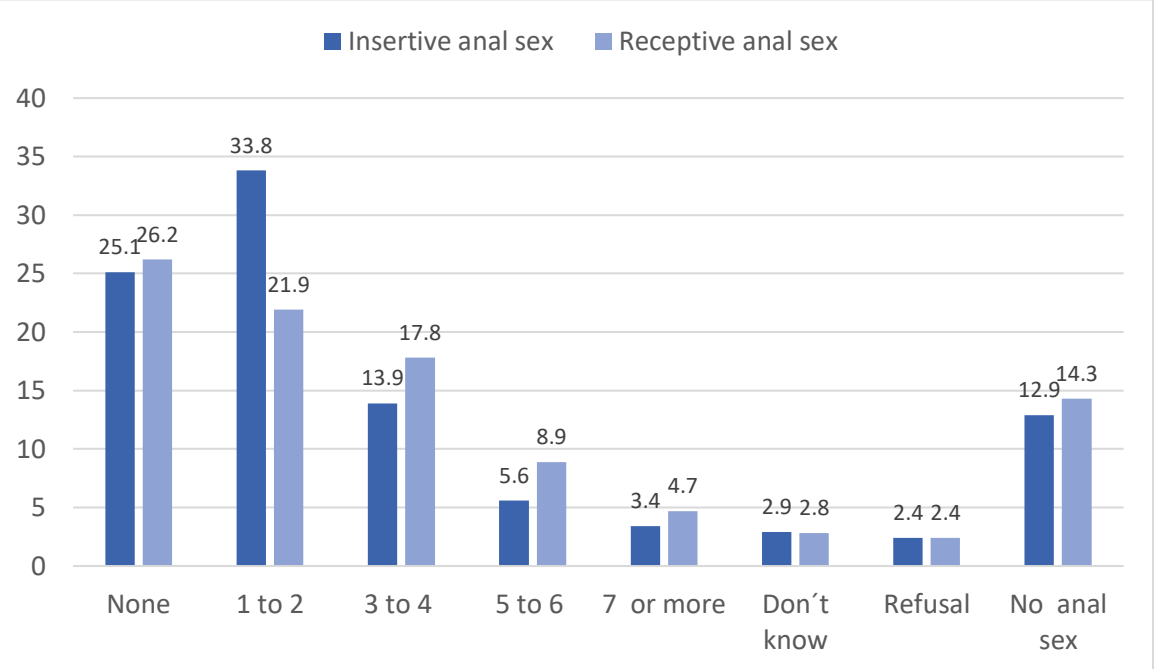
Table 22. % of Respondents Reporting Condom Use during Last Anal Sex by District

		District				
		Belize	Cayo	Orange walk	Others	Total
The last time I had anal sex I used a condom	Yes	343	223	91	86	743
		75,6%	79,9%	64,1%	69,9%	74,4%
	Not selected	111	56	51	37	255
		24,4%	20,1%	35,9%	30,1%	25,6%
Total		454	279	142	123	998
		100,0%	100,0%	100,0%	100,0%	100,0%

Over a third of all respondents reported having unprotected anal sex with a biological male partner within the last 3 months.

The figure below presents the percentage of biological males with whom respondents had insertive anal sex (bark blue column in figure below) versus receptive anal sex (light blue column) in the last 3 months. The mean number of biological males with whom respondents had insertive anal sex in the last 3 months with was 2, and 2.1 for receptive anal sex.

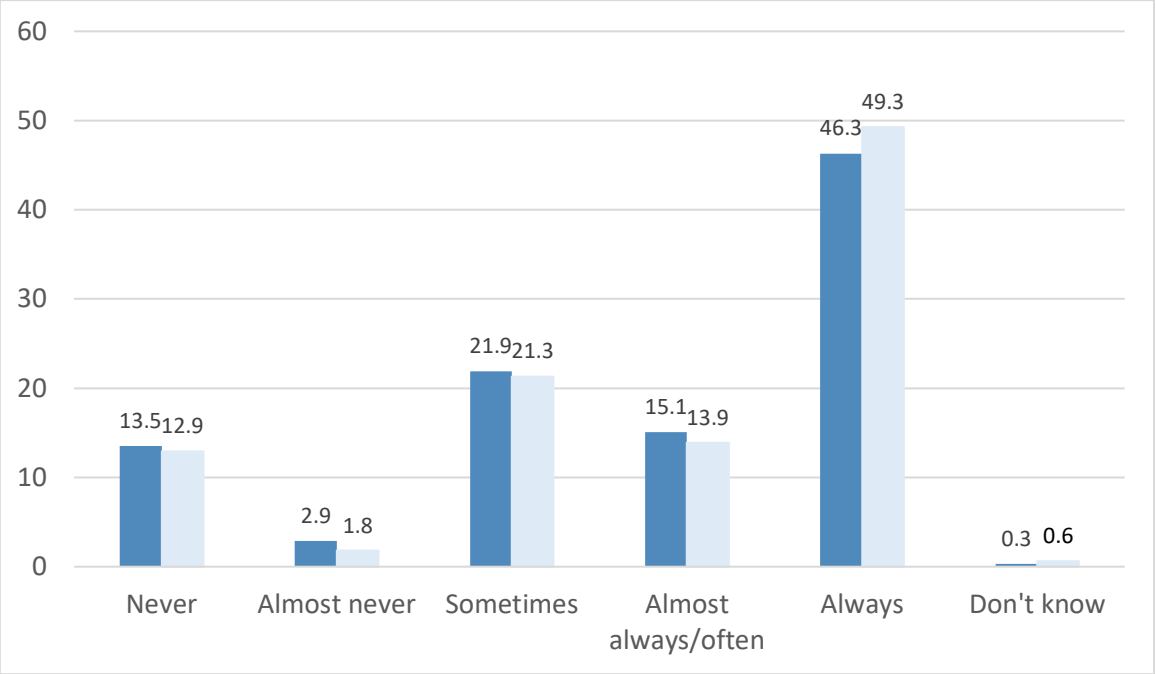
Figure 17. % of Biological Males Respondents who had Insertive/Receptive Anal Sex Last 3 Months



When asked about frequency of condom use in anal sex with a biological male partner in the last 3 months, as the insertive partner (dark blue column in figure below), and as the receptive

partner (light blue column in figure below); a 38.3% reported condom use never, almost never, sometimes as the insertive partner , and 36% as the receptive partner .

Figure 18. Condom Use in the last 3 Months as Insertive/Receptive Partner



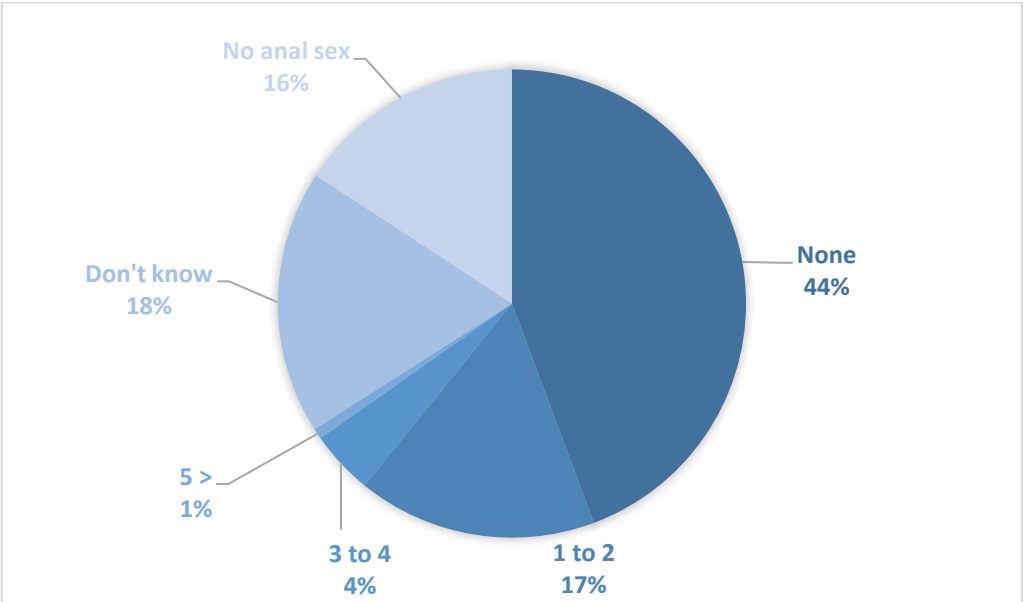
When comparing insertive and receptive anal sex behaviour in the last 3 months across districts, it can be noted that respondents from Orange Walk were more likely to report just insertive or just receptive anal sex with biological males in the last 3 months than respondents from other districts (29.3% and 22.7% respectively). Whilst respondents from Cayo were more likely to report being versatile (both being the insertive and receptive partner).

Table 23. Insertive and Receptive Anal Sex Behaviours across Districts

		District				
		Belize	Cayo	Orange walk	Others	Total
Insertive or receptive anal sex with men in last 3 months	Just insertive anal sex with men	105 19,7%	53 16,6%	44 29,3%	14 9,9%	216 18,8%
	Just receptive anal sexwith men	72 13,5%	57 17,8%	34 22,7%	32 22,5%	195 17,0%
	Insertive and receptive anal sexwith men	205 38,4%	126 39,4%	48 32,0%	51 35,9%	430 37,5%
	No anal sexin last 3 months	47 8,8%	24 7,5%	12 8,0%	14 9,9%	97 8,5%
	No anal sexever	80 15,0%	41 12,8%	8 5,3%	19 13,4%	148 12,9%
	Refusal or undefined	25 4,7%	19 5,9%	4 2,7%	12 8,5%	60 5,2%
Total		534 100,0%	320 100,0%	150 100,0%	142 100,0%	1146 100,0%

Also of concern is that respondents reported on average 0.7 condom breakages or slipping off in the last 3 months during anal sex.

Figure 19. Frequency of Condom breakage/slippage in the last 3 Months, Anal Sex



Main Biological Male Sex Partners

The mean number of main male partners with whom respondents had anal sex over three months was 0.7. The 20.2% of respondents reported only having sex (any type of sex) with main partners in the last 3 months, whilst a quarter reported having sex with both main and casual partners (24.7%). The vast majority of respondents reported having had anal sex with 1 main partner in the last 3 months (41.3%); just over 10% reported having 2 to 3 main partners (10.7%); and 1.5% reported having four or more.

Over half reported a lifetime prevalence of unprotected sex with a main male partner (54.2%), and almost 40% reported unprotected anal sex in the last sexual act with a main partner (37.5%).

Casual Biological Male Sex Partners

The mean number of casual partners with whom partners had anal sex over the last 3 months was 1.5 men, (range of zero to 49). 17.1% of respondents reported only having main partners in the last 3 months; and 24.7% reported having both main and casual partners in the last 3 months. Almost 50% of respondents reported not having had anal sex with a casual partner in the last 3 months, 15% reported one casual partner (15.2%), about 20% between 2 and 3 (20.8%), 7.2% between 4 and 5, almost 5% % reported 6 or more (4.8%).

A 40% reported a lifetime prevalence of unprotected sex with casual male partner (39.9%), and almost 17% reported unprotected anal sex in the last sexual act with a casual partner (16.9%).

Male sex worker partners

Respondents were asked about how many times in the past 3 months they had paid or provided favours, gifts or other types of compensation for sex with a male or transgender sex worker. 83.5% reported not to have done so; 4.5% ; 8.1% reported between 2 and 5 times; and 0.3% reported 6 or more times. When respondents were asked whether they had ever had anal sex without a condom with a male or transgender sex worker, 11.7% responded that they had.

Comparing results between districts we note that respondents from the three remote districts (Corozal, Stann Creek and Toledo) were more likely to have had unprotected sex with a male or transwoman they had paid for sex than in other districts.

Table 24. % of Respondents Reported Unprotected Sex with Male /Trans Sex Worker Partner

		District				
		Belize	Cayo	Orange walk	Others	Total
Have you ever had anal sex without a condom with a male or trans who you paid for sex?	Yes	50	25	20	22	117
		11,2%	9,0%	14,6%	18,5%	11,9%
	No	397	252	117	97	863
		88,8%	91,0%	85,4%	81,5%	88,1%
Total		447	277	137	119	980
		100,0%	100,0%	100,0%	100,0%	100,0%

As noted already **Paying Partners** will be considered in a separate section devoted to MSM and Transgender Sex Workers.

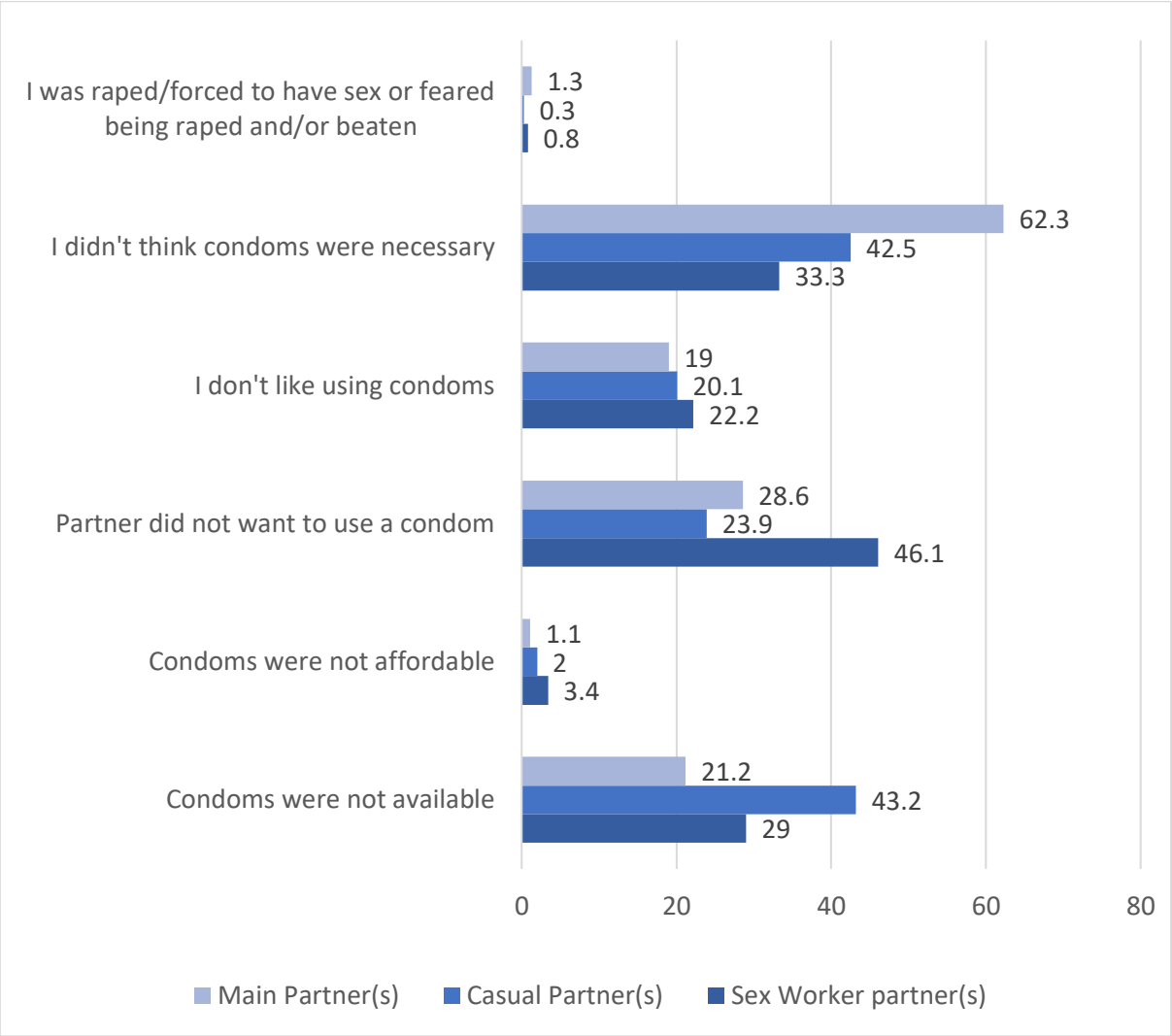
Reasons for Non-use of Condoms among MSM and Transwomen with Different Sex Partners

We have already noted that the extent of non- condom use is affected by the type of sexual partner with overall less condoms used with main versus casual partners. We also noted that, contrary to what we would have expected, unprotected sex with main and casual partners tended to be higher when the respondent was the receptive partner as opposed to the active partner, given the added risk of HIV transmission in receptive anal sex.

Here we compare the principle reasons cited for unprotected sex with different partner types. The major reasons given by respondents for not using a condom the last time they had anal sex with each of the sexual partner types is detailed in the figure below. The principle reasons associated with non-condom use with main male partners was that respondent did not think it was necessary (62.3%); whereas the principle reason for not using it with a casual sexual partner was that the casual partner did not want to use them (46.1%). The fact that condoms were not available at the moment of sex was flagged with all partner types, but particularly with casual sex partners, perhaps on account of the opportunistic nature of some of the sex with casual partners.

Figure 20. Principal Reasons for not Using Condom during Last Anal Sex Act by Partner Type

Note: Principal Reasons for not Using Condom during Last Anal Sex Act was a multiple-answer question so percentages add up to more than 100%.



Female Sexual Partners

Respondents were asked about lifetime prevalence of any type of sex with a female partner, and almost 55% reported having had (54.8%), versus 45.2% who had never had sex of any kind with a woman.

Respondents in Belize district reported higher rates of ever having any type of sex with a woman in comparison to the other districts.

Table 25. Life-time Prevalence of any Type of Sex with a Female Partner

		District				
		Belize	Cayo	Orange walk	Others	Total
Have you ever had any type of sex with a woman?	Yes	315 59,0%	156 48,8%	85 56,7%	72 50,7%	628 54,8%
	No	219 41,0%	164 51,3%	65 43,3%	70 49,3%	518 45,2%
Total		534 100,0%	320 100,0%	150 100,0%	142 100,0%	1146 100,0%

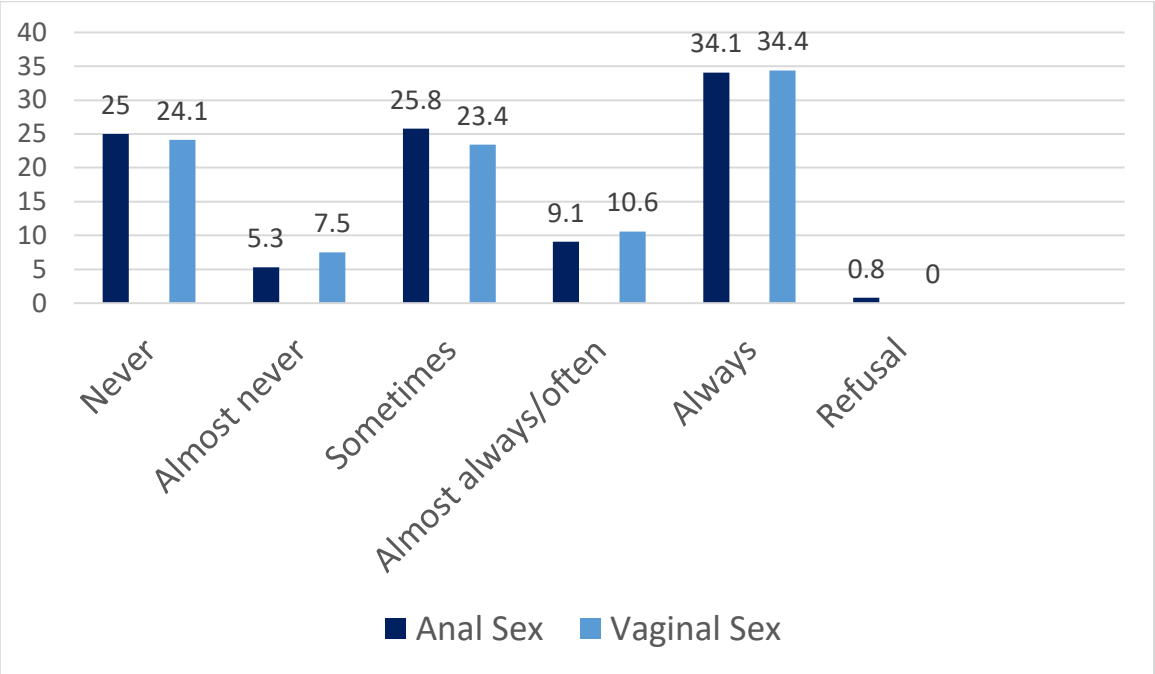
When asked about sex in the last 12 months (last year prevalence) with female partners, the overall percentages dropped just a little from 55% (54.8%) for life prevalence, to 52.9% for sex in the last 12 months. Orange Walk district reported having had vaginal sex with a woman in last 12 months in higher percentages than elsewhere (81.2%), whilst respondents in remote districts of Corozal, Stann Creek and Toledo reported the lowest percentage of respondents reporting sex with women in the last year (59.7%).

Table 26. Prevalence of Sex with a Female in the Last 12 Months by District

		District				
		Belize	Cayo	Orange walk	Others	Total
In the last 12 months, have you had vaginal or anal sex with a woman?	Yes	169 53,7%	65 41,7%	69 81,2%	29 40,3%	332 52,9%
	No	146 46,3%	91 58,3%	16 18,8%	43 59,7%	296 47,1%
Total		315 100,0%	156 100,0%	85 100,0%	72 100,0%	628 100,0%

On average respondents reported having had vaginal sex with just over 4 women over the last 12 months (4.2) (range was 0 to 100); and anal sex with about 1 woman (0.9) (range: 0 to 35). Condom use with female partners for vaginal (light blue column) and anal sex (dark blue column) over the last 12 months is illustrated in the figure below with a minimal tendency to use condoms less likely with anal sex compared to vaginal sex.

Figure 21: Condom Use for Vaginal and Anal Sex over last 12 Months with Female Partners

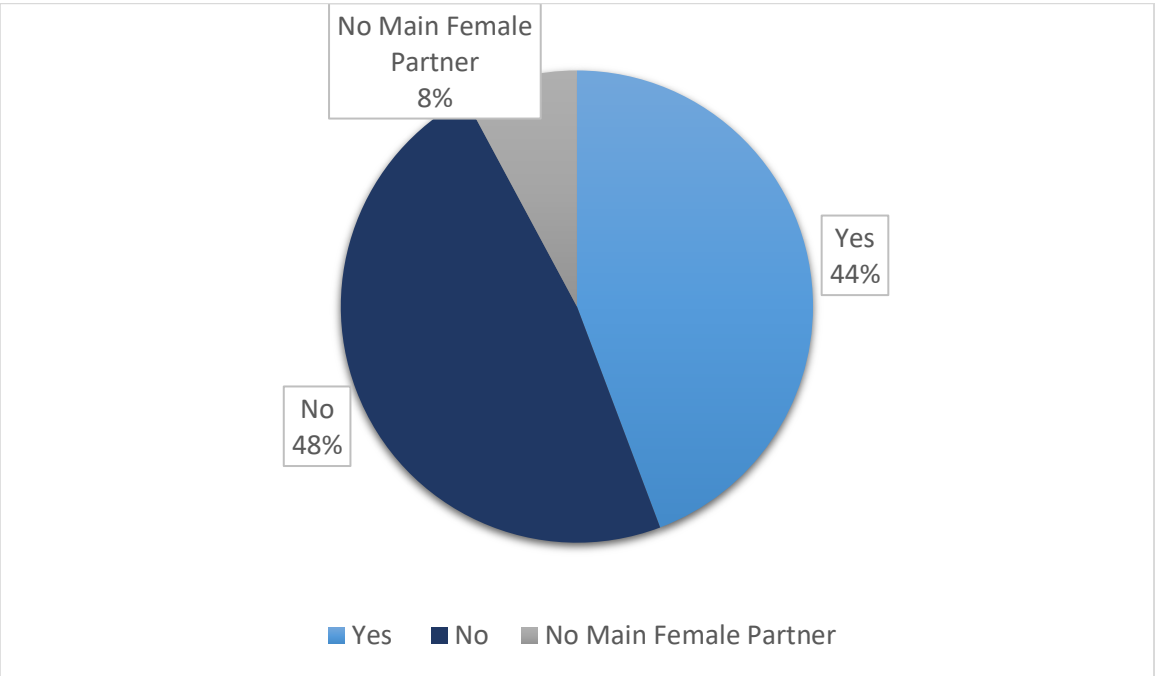


Main Female Sexual Partners

Respondents reported a lifetime prevalence of sex with a woman (ever had sex with a woman) of 55% (54.8%). The 29.0% of all respondents reported having had sex with a woman who is a main sexual partner in the last 12 months. Of the 29% of respondents who reported they have had sex with a female in the last 12 months, 92.2% reported that this included a main female sexual partner(s) in the last 12 months.

Almost half or respondents reported unprotected sex with a main female partner last time they had vaginal or anal sex (48%), and more indicated not using a condom than those who did.

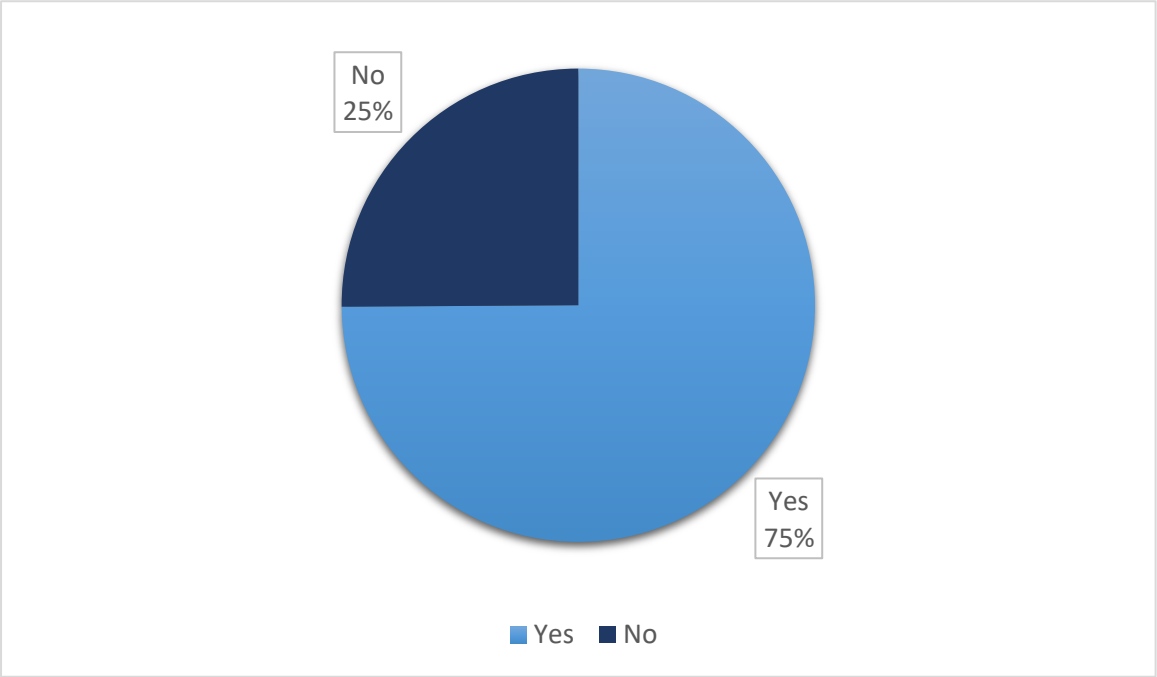
Figure 22. Condom Use in Last Vaginal or Anal Sex with a Main Female Partner



Casual Female Sexual Partners

The average number of casual female sex partners respondents reported in the last year was 2.1 (range: 0 to 49). A 39.4% reported no casual female partners in the last 12 months; 19,3% one; 24.2% two to three; 9.3% four to five; and 3.1% reported 6 or more casual female sex partners in the last 12 months. A quarter of respondents reported unprotected sex with a female partner in last vaginal or anal sex (25.1%).

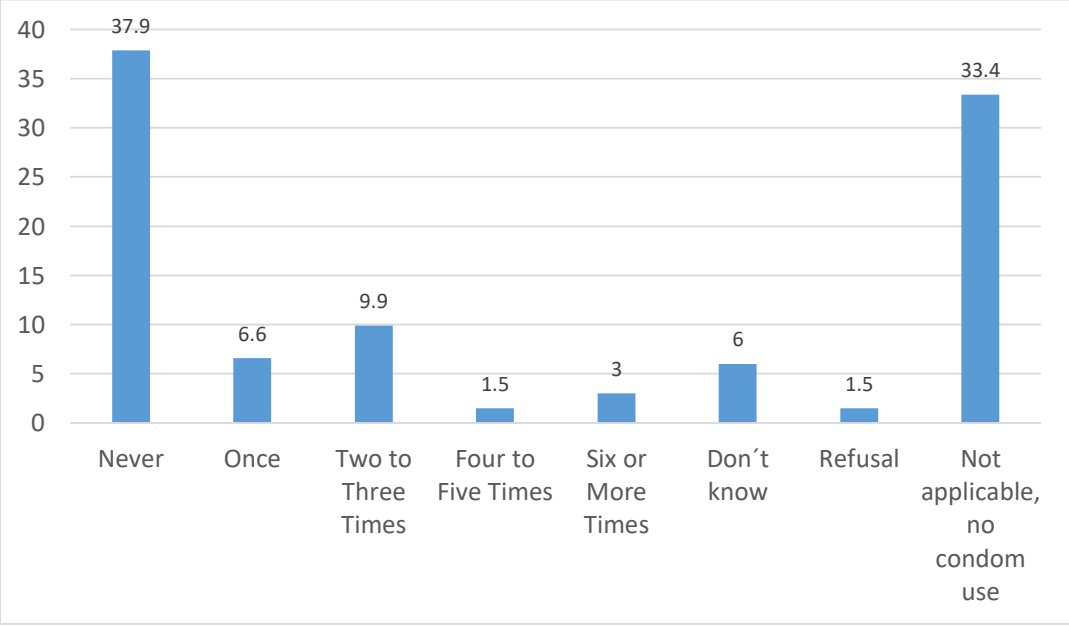
Figure 23. Condom Use in Last Vaginal or Anal Sex with a Casual Female Partner



Condom Failure with Female Sex Partners

Respondent has referred condom slippage or breakage during vaginal or anal sex with a woman an average of 1.1 times in the last 12 months.

Figure 24. Frequency Condom Slippage/Breakage during vaginal /Anal Sex with a Woman in Last 12 Months



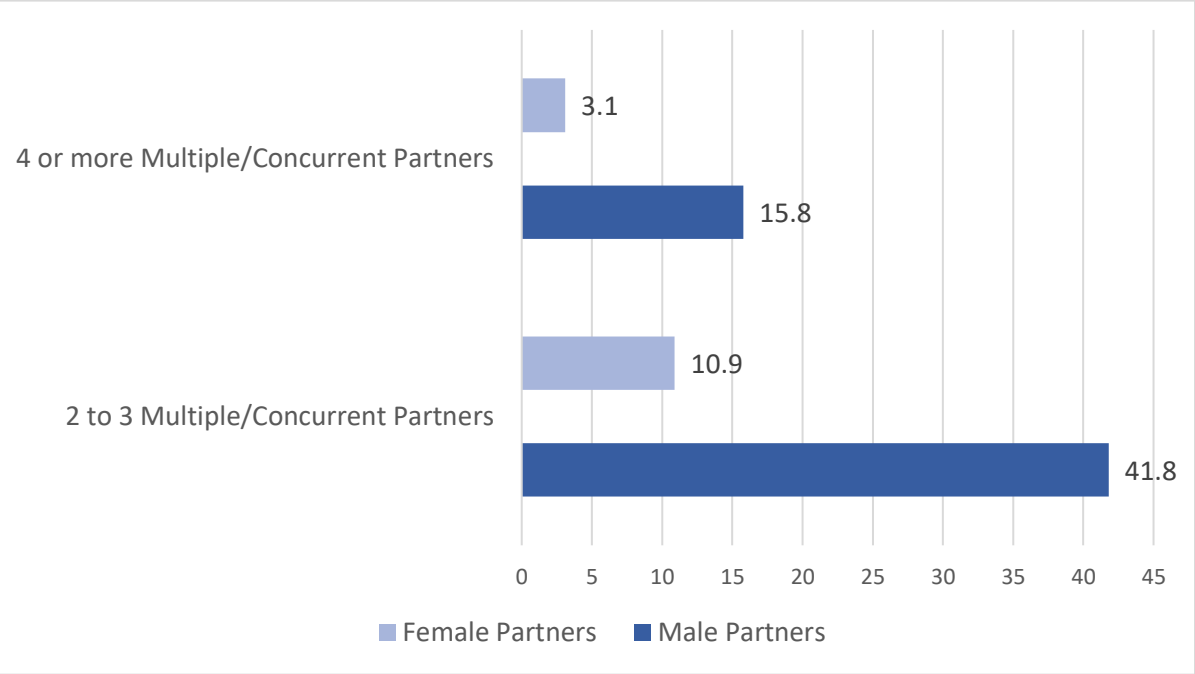
Multiple Concurrent Sexual Partners

Concurrent sexual partnerships describe situations in which an individual has overlapping sexual relationships with more than one person. This end of the spectrum can be contrasted with serial monogamy, where an individual has a sexual relationship with only one partner, with no overlap in time with subsequent partners. Some researchers have suggested that concurrent relationships can increase the size of an HIV epidemic, the speed at which it infects a population and its persistence within a population[xx]. It should however be pointed out that the evidence to support this is limited.[xxi]

A total of 62.7% of respondents reported having multiple concurrent relationships in the last 12 months, and 37.3% reported not having them. The number of male and female partners is presented in the figure below.

Figure 25. % of Respondents who Reported Having Multiple Concurrent Relationships in the Last 12 Months

Note: Only selected answers of interest are presented in the graph.



Difference between districts were observed in when it comes to having multiple concurrent male and female in the last 12 months, with respondents from Orange Walk (34.7%) reporting the lowest rates for multiple concurrent male, and Cayo for female partners(6.6%).

Table 27. Percentage of Respondents who reported Having Multiple Male Concurrent Relationships in the Last 12 Months by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Multiple partners: 2-3 male sexpartners	Yes	220	140	52	67	479
		41,2%	43,8%	34,7%	47,2%	41,8%
	No selected	314	180	98	75	667
		58,8%	56,3%	65,3%	52,8%	58,2%
Total		534	320	150	142	1146
		100,0%	100,0%	100,0%	100,0%	100,0%

Table 28. % of Respondents who reported Having Multiple Female Concurrent Relationships in the Last 12 Months by District

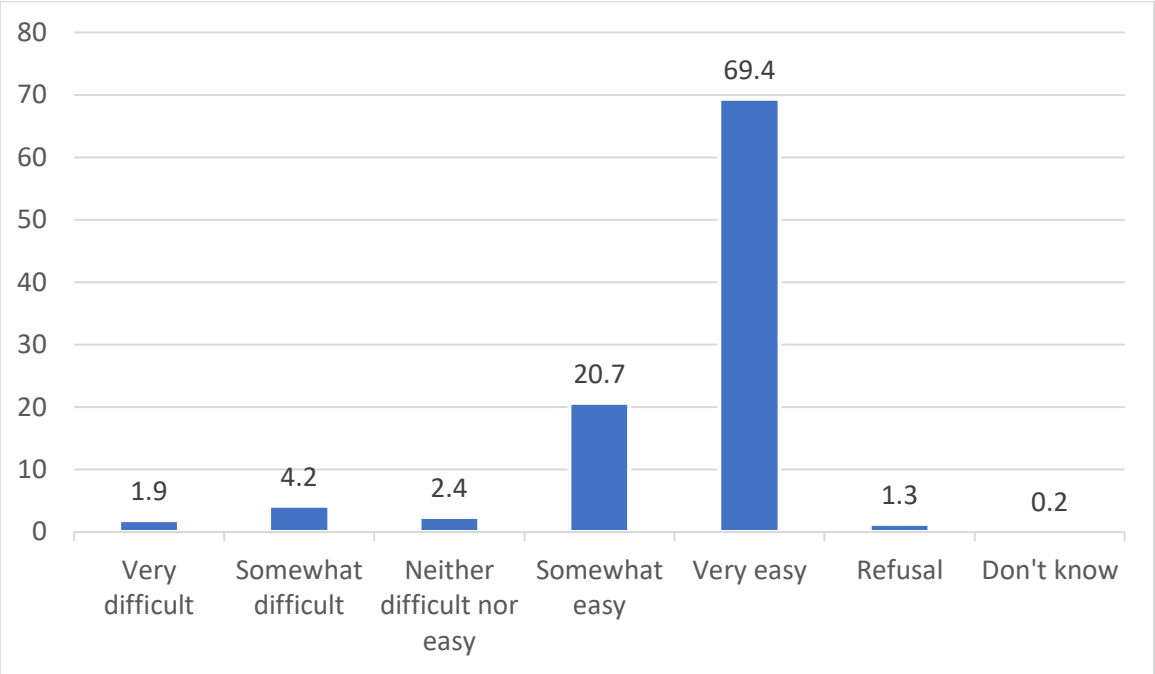
		District				
		Belize	Cayo	Orange walk	Others	Total
Multiple partners: 2-3 female partners	Selected	65	21	27	12	125
		12,2%	6,6%	18,0%	8,5%	10,9%
	No selected	469	299	123	130	1021
		87,8%	93,4%	82,0%	91,5%	89,1%
Total		534	320	150	142	1146
		100,0%	100,0%	100,0%	100,0%	100,0%

Access to Condoms, Lubricants, Health Care Services and HIV Information

Condom Access

The majority of respondents indicated that condoms were very easy to somewhat easy to obtain (90.1%). Only 6% of respondents reported that condoms were very difficult or somewhat difficult to obtain.

Figure 26. Condom Accessibility



About 40% of respondents' report both buying condoms and getting them for free (40.1%). A third of respondents' report that they only buy condoms (33.2%). Just over a fifth reported getting condoms free (21.8%).

District differences are presented in the table below. It is surprising that the highest percentages of respondents reporting accessing free condoms came from the remoter districts (40.1%); whilst respondents from Cayo district reported highest rates of purchasing condoms themselves (42.2%).

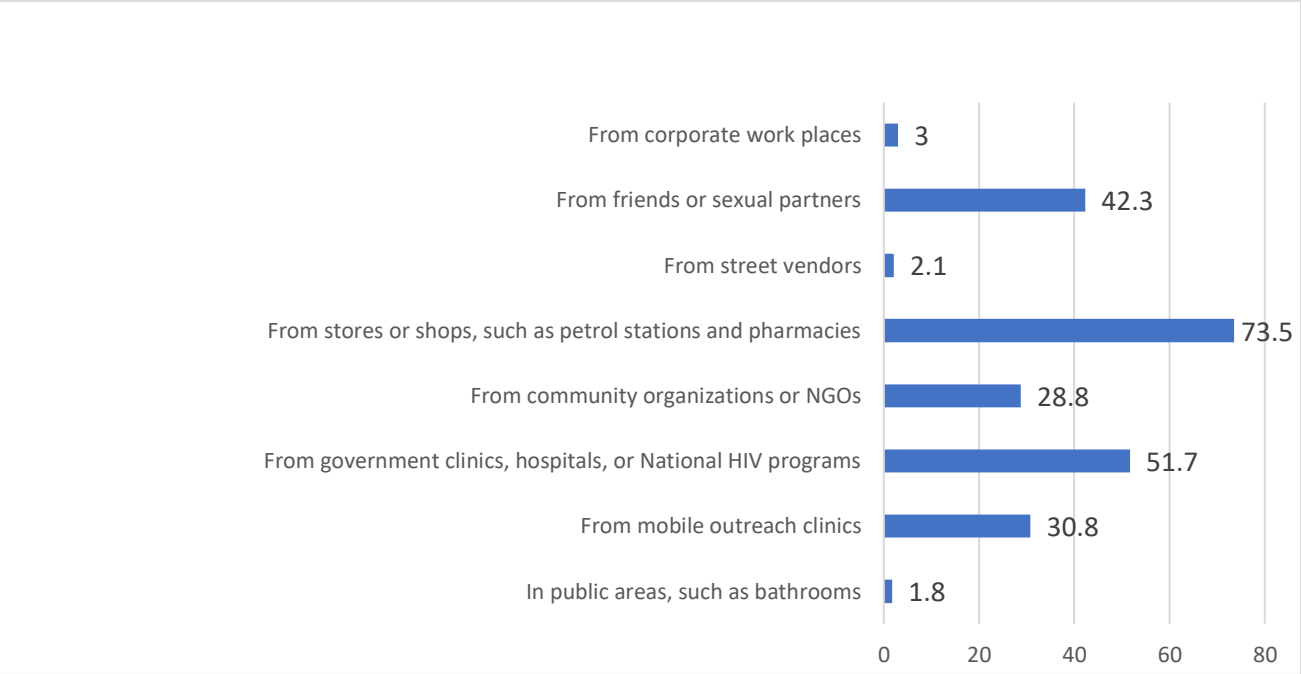
Table 29. Free versus Purchased Condoms by District

		District				
		Belize	Cayo	Orange walk	Others	Total
In general, do you buy condoms or get them for free?	Buy them	160	135	45	40	380
		30,0%	42,2%	30,0%	28,2%	33,2%
	Get them for free	88	52	53	57	250
		16,5%	16,3%	35,3%	40,1%	21,8%
	Both	263	115	50	41	469
		49,3%	35,9%	33,3%	28,9%	41,0%
	Neither	22	18	2	4	46
		4,1%	5,6%	1,3%	2,8%	4,0%
Total		533	320	150	142	1145
		100,0%	100,0%	100,0%	100,0%	100,0%

The most frequently cited place for obtaining condoms were commercial sales points (stores and pharmacies, 73.5%), followed by government distribution sites (Government Health centres and NAC, 51.7%).

Figure 27. Commonly reported Places for Obtaining Condoms

Note: Commonly reported Places for Obtaining Condoms was a multiple-answer question so percentages add up to more than 100%.



Lubricants

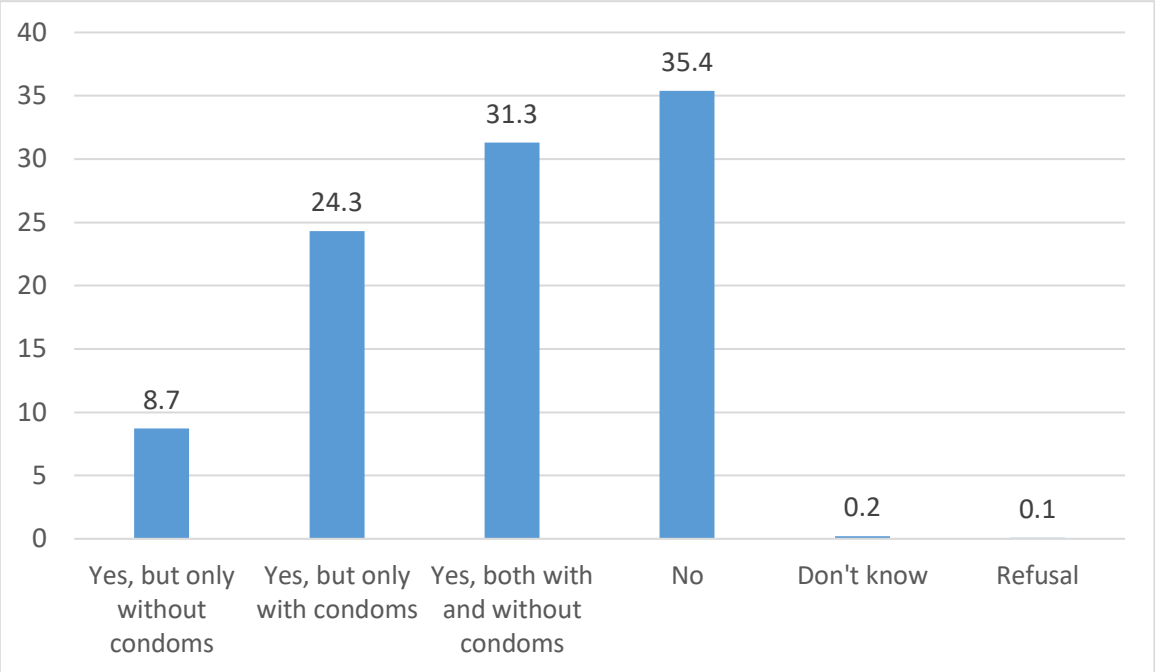
Respondents were asked about the use of lubricants during sex in general. Just over 35% reported not using lubricants for any kind of sexual activity. Over 90% of respondents reported using lubricants during anal sex with men (92.9%). By contrast, just over half of respondents reported using lubricants when having vaginal or anal sex with women (55.0%).
Lubricant use varied by district. In the three remote districts (Corozal, Stann Creek and Toledo), just over half of respondents reported not using lubricants during sex (50.7%).

Table 30. Lubricant Use Ever During Sex

		District				
		Belize	Cayo	Orange walk	Others	Total
Have you ever used lubricants during sex?	Yes, but only without condoms	45 8,5%	21 6,6%	25 16,7%	9 6,3%	100 8,7%
	Yes, but only with condoms	132 24,8%	89 27,9%	38 25,3%	19 13,4%	278 24,3%
	Yes, both with and without condoms	172 32,3%	99 31,0%	46 30,7%	42 29,6%	359 31,4%
	No	183 34,4%	110 34,5%	41 27,3%	72 50,7%	406 35,5%
Total		532 100,0%	319 100,0%	150 100,0%	142 100,0%	1143 100,0%

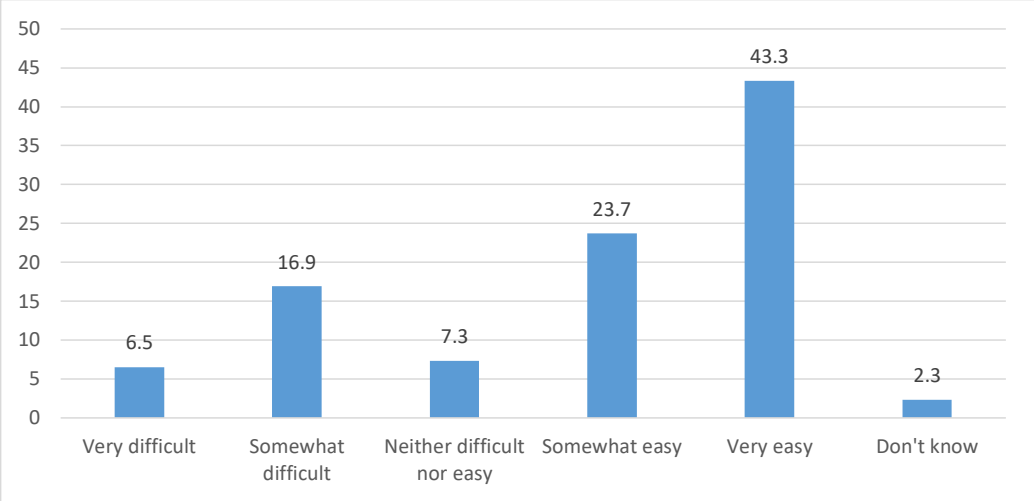
About a third part of the sample reported using lubricants both with and without condoms (31.3%); and almost a quarter only with condoms (24.3%); and 8.7% only without condoms.

Figure 28. Lubricant Use with and without Condoms



When asked specifically about the availability of commercial lubricants respondents, almost 70% of respondents reported that commercial lubricants were very easy or somewhat easy to obtain (67.0%).

Figure 29. Accessibility of Commercial Lubricants



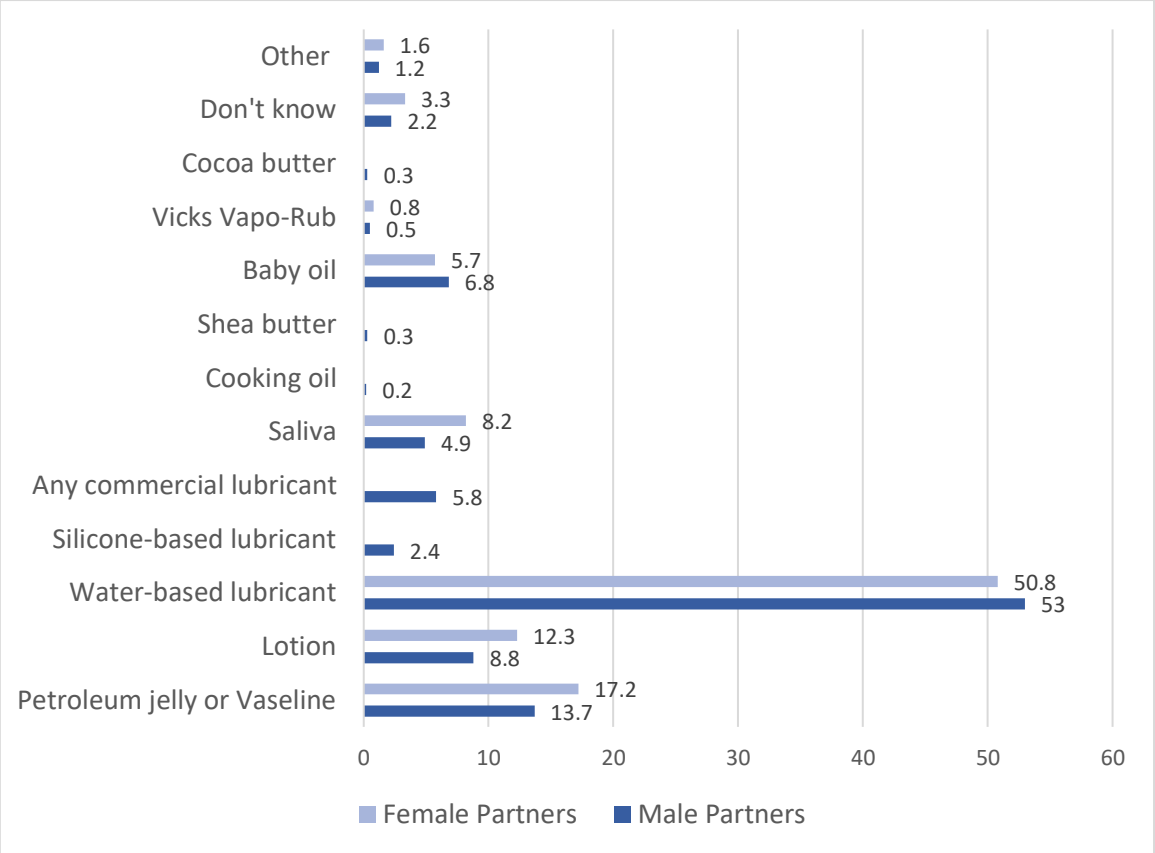
Respondents from the remote districts (Corozal, Stann Creek and Toledo) were more likely to report great difficulty accessing commercial lubricants than in the other districts.

Table 31. Commercial Lubricant Access by District Most Commonly Used Lubricant

		District				
		Belize	Cayo	Orange walk	Others	Total
How difficult or easy is it for you to get commercial lubricants when you need them?	Very difficult	22	13	5	6	46
		6,9%	6,4%	4,7%	9,2%	6,6%
	Somewhat difficult	59	43	9	9	120
		18,4%	21,3%	8,5%	13,8%	17,3%
	Neither difficult nor easy	21	18	9	4	52
		6,6%	8,9%	8,5%	6,2%	7,5%
	Somewhat easy	63	65	24	16	168
		19,7%	32,2%	22,6%	24,6%	24,2%
	Very easy	155	63	59	30	307
		48,4%	31,2%	55,7%	46,2%	44,3%
Total		320	202	106	65	693
		100,0%	100,0%	100,0%	100,0%	100,0%

When asked about what specific lubricants respondents use during anal sex with a man or vaginal or anal sex with a woman, it became apparent that respondents may not actually be using commercial water-based lubricants, but rather improvising with a series of common household products, many of which are oil rather than water-based. The figure below lists the most commonly used lubricant cited by respondents for anal sex with men, and vaginal or anal sex with women.

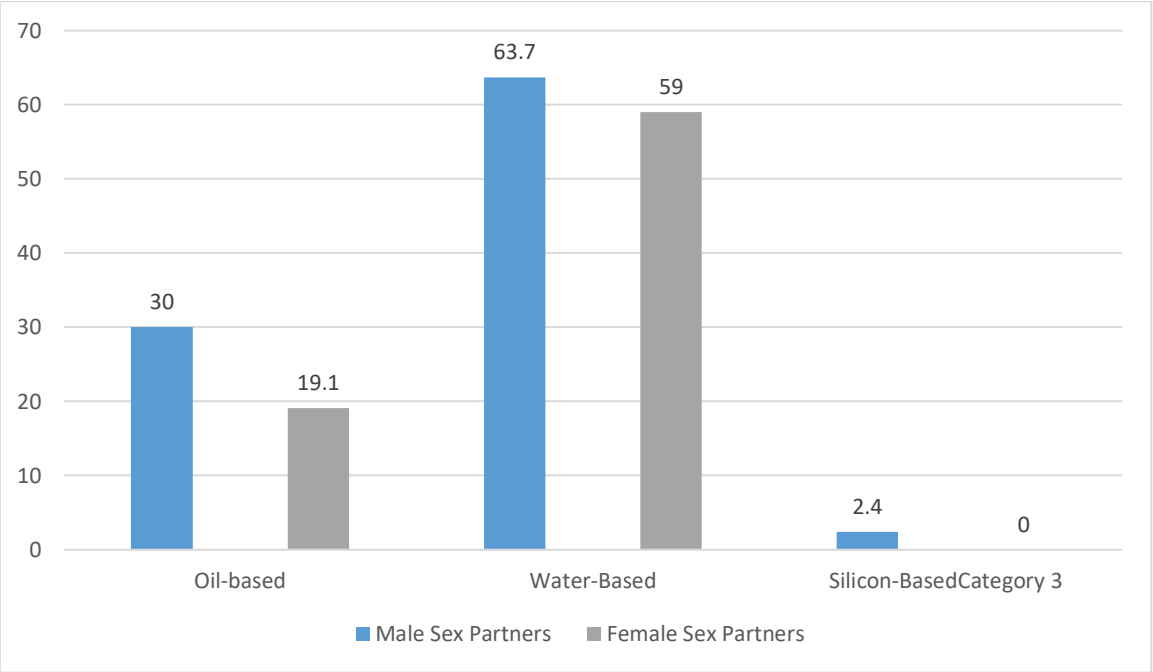
Figure 30. Most Commonly Used Lubricant with Male versus Female Sexual Partners



When this information about the most commonly used lubricants with male and female sex partners is analysed we can draw a few important conclusions:

1. There is a high reliance on improvised lubricants using common household products, whose exact ingredients may not be known to respondents (e.g. lotions).
2. Commercial lubricants specifically designed for sex are rarely being used (not at all with female partners, and in less than 6% of cases with male partners (5.8%).
3. There is wide-spread use of oil-based lubricants, almost 20% with female partners (19,1%); and 30% with male partners. This is of great concern given the ability of oil-based lubricants to break down and weaken latex condoms.[xxii]
4. Water and silicon based lubricants together represent just about a half of the lubricants most currently used (50.8% for female partners and 55,4% for male partners), when they should represent 100% of the lubricant most commonly selected. This suggests incorrect knowledge about the type of lubricant that should be used with condoms.

Figure 31. Lubricant base by Male/Female Sexual Partner

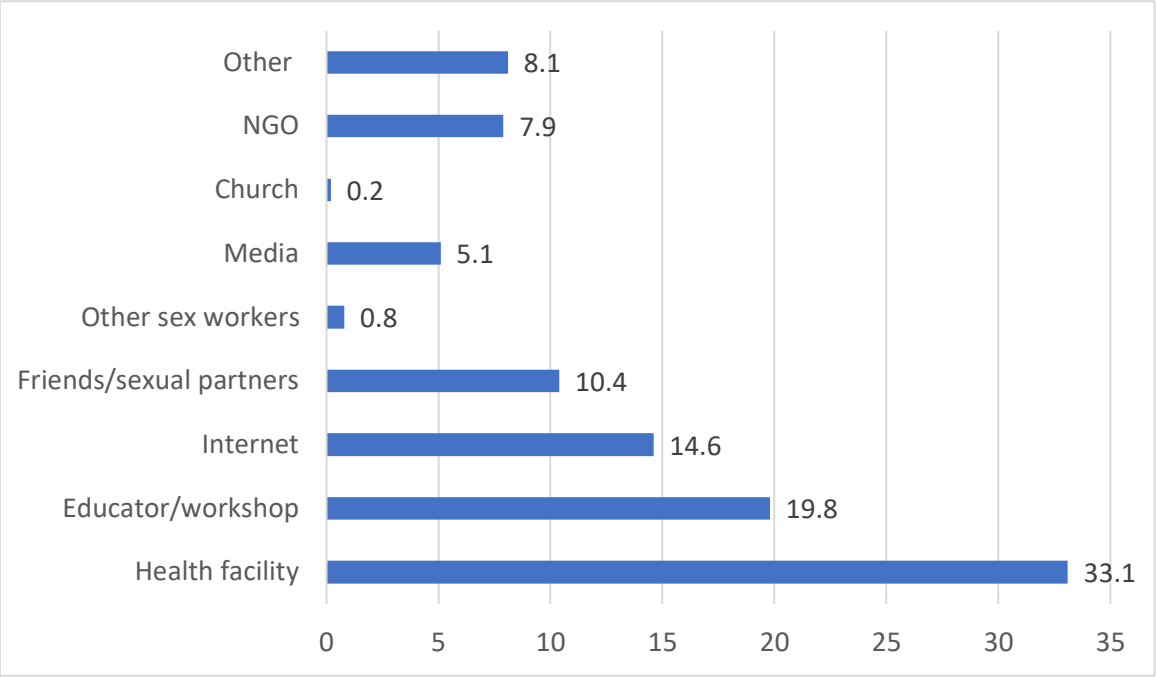


HIV Knowledge and Sexually Transmitted Infections (STI) Testing

Over half of respondents reported not having received any HIV prevention in the last 12 months (53.8%). A 29.8% had not accessed specific HIV information to prevent HIV infection with women, and 27.4% had not accessed specific HIV information to prevent HIV infection with men.

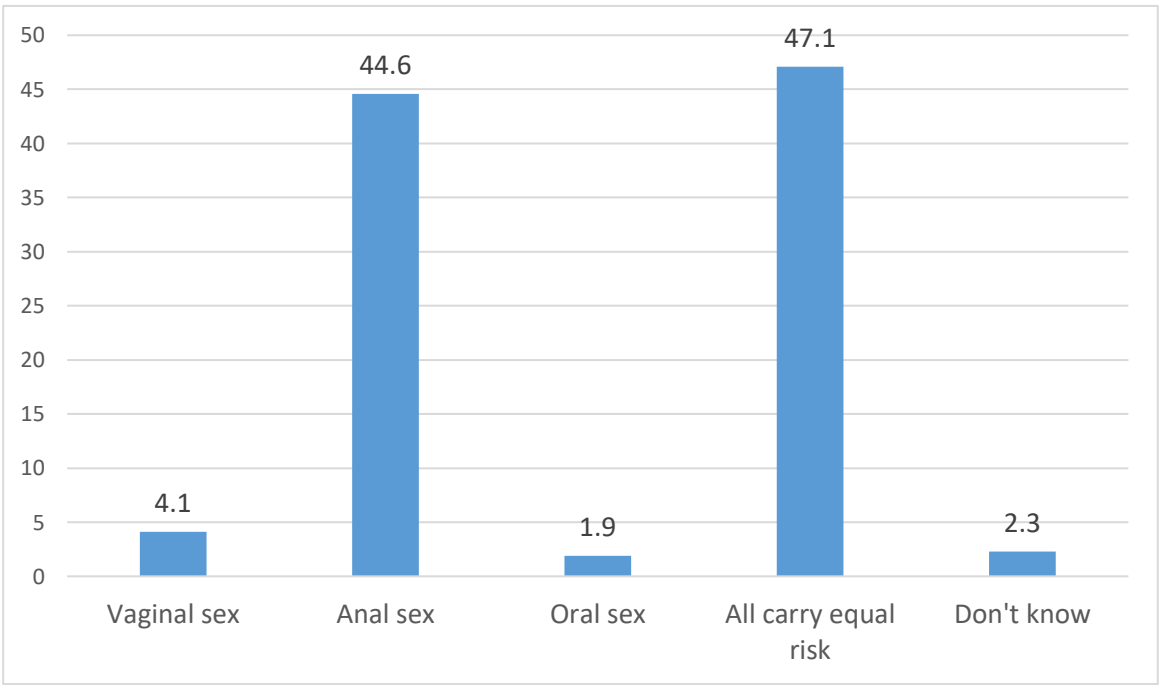
The figure below details the primary sources of HIV information mentioned by respondents. It is noteworthy that the majority of respondents' report receiving their HIV information from a health centre (33.1%) and less than 8% from an NGO (7.9%).

Figure 32. Major Source of HIV Prevention Information



Less than 45% of respondents (44.6%) were capable of identifying anal sex as the sexual practice with greatest risk for HIV transmission. The majority reported incorrectly that oral, vaginal and anal sex carried equal risk (47.1%).

Figure 33. Knowledge of HIV Risk Associated with Different Sexual Practises



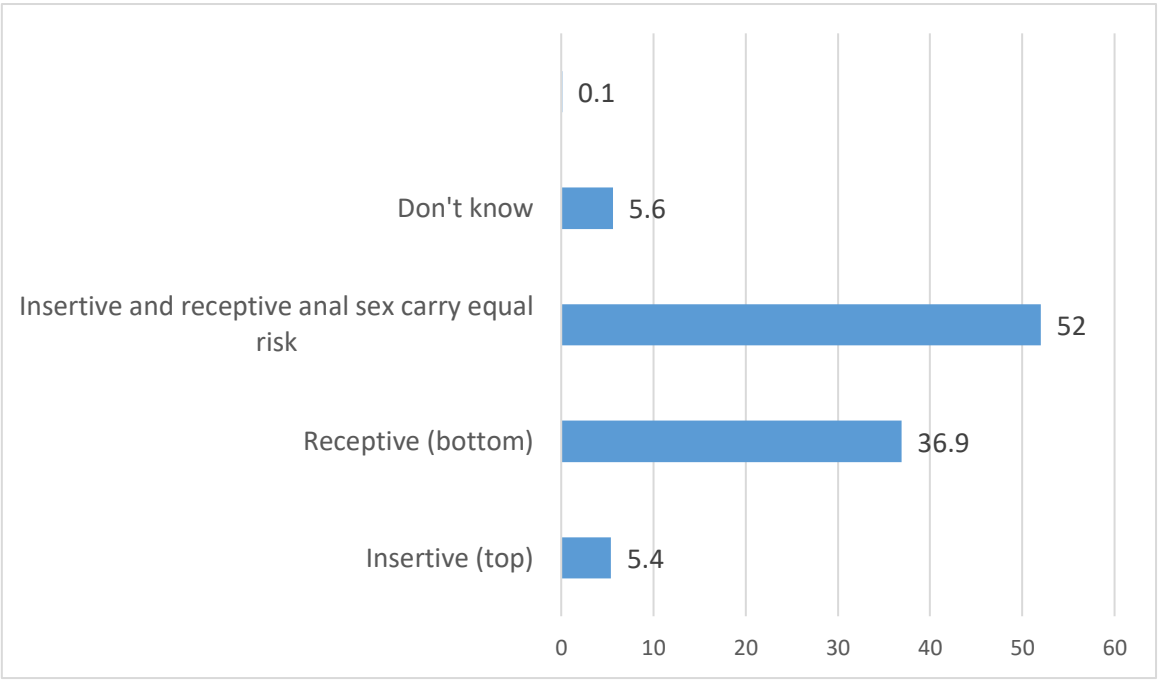
District differences are depicted in the table below, where we note that respondents from the remoter three districts (Corozal, Stann Creek and Toledo) were more likely to correctly identify anal sex as the most risky sexual practice for HIV infection than the other districts.

Table 32. Knowledge of HIV Risk Associated with Different Sexual Practises by District

		District				
		Belize	Cayo	Orange walk	Others	Total
What type of sex puts you most at risk for HIV infection?	Vaginal sex	21	6	9	11	47
		4,0%	1,9%	6,1%	7,8%	4,2%
	Anal sex	234	143	60	74	511
		44,9%	46,1%	40,5%	52,5%	45,6%
	Oral sex	14	3	3	2	22
		2,7%	1,0%	2,0%	1,4%	2,0%
	All carry equal risk	252	158	76	54	540
		48,4%	51,0%	51,4%	38,3%	48,2%
Total		521	310	148	141	1120
		100,0%	100,0%	100,0%	100,0%	100,0%

When asked about whether being the insertive (top) or the receptive (bottom) partner in anal sex carried greater risk for HIV transmission, only 36.9% answered correctly that being the receptive partner carried the greatest risk for transmission; over half of respondents believed that insertive and receptive anal sex carry equal risk (52.0%).

Figure 34. Knowledge of HIV Risk Associated with Different Sexual Roles



District differences reflect knowledge gaps being more pronounced in Orange Walk, where only 27.1% of respondents were able to identify receptive anal sex as carrying the greatest risk for HIV transmission.

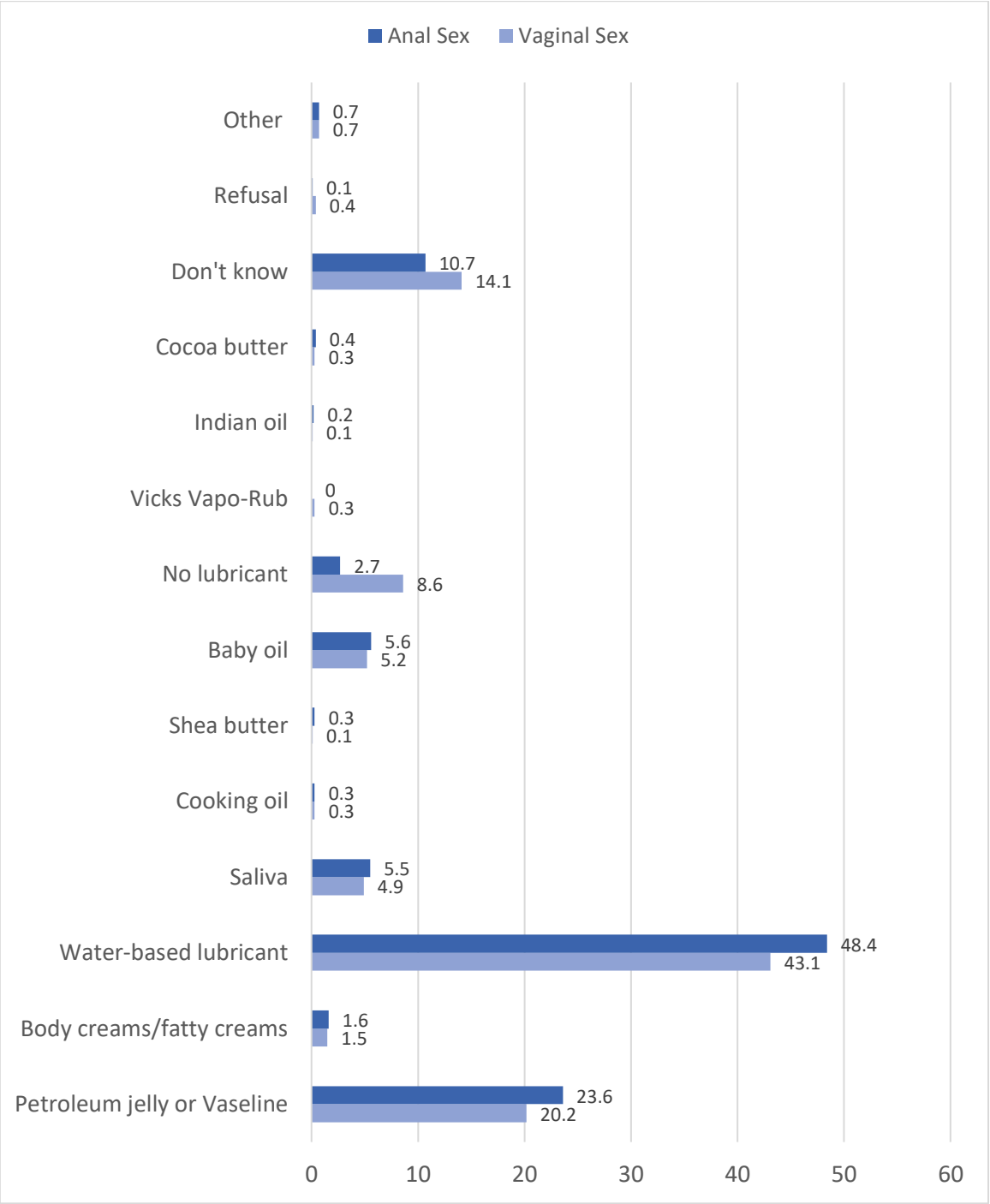
Table 34. Knowledge of HIV Risk Associated with Different Sexual Roles

		District				
		Belize	Cayo	Orange walk	Others	Total
Does top or bottom put you at a greater risk for HIV infection?	Insertive (top)	25 5,0%	16 5,3%	9 6,4%	12 9,1%	62 5,7%
	Receptive (bottom)	229 45,3%	107 35,2%	38 27,1%	49 37,1%	423 39,1%
	Insertive and receptive anal sex carry equal risk	251 49,7%	181 59,5%	93 66,4%	71 53,8%	596 55,1%
Total		505 100,0%	304 100,0%	140 100,0%	132 100,0%	1081 100,0%

Respondents were asked about what they believed to be the safest lubricant to use with latex condoms. The answers provided are outlined in the Figure below. What is of great concern is:

- ✓ Less than half correctly identified water-based lubricants as the safest choice for anal and vaginal sex (48.4% and 43.1% respectively);
- ✓ an array of oil-based household products were cited by respondents as the safest lubricant with latex condoms
- ✓ Between 11% and 14% reported, they had no idea (10.7% and 14.1%).

Figure 35. Safest Lubricant to Use with Latex Condoms



When asked whether HIV can be transmitted through needle sharing, over 90% said yes (92.8%), whilst the remainder either said no or that they were unsure of the answer (7.3%).

Sexually Transmitted Infections (STIs)

Over 60% of respondents reported they had not had an STI test in the last 12 months (61.4%). Of the 38.2% who reported having had a STI test done in the last 12 months, gonorrhoea followed by herpes and syphilis on a par, were the three most commonly cited testing indicated; this was followed by Hepatitis B; and then HPV, HTLV 1, Hepatitis C with similar low frequency. Interviewees were also asked if they have had symptoms of a sexually transmitted infection including genital discharge or ulceration in the last 12 months. A 90.5% of respondents denied having manifested any STI symptoms, 8.7% said that they had presented symptoms, and a further 0.7% were unsure.

Of those respondent's presenting symptoms in the last year, just over 60% (61.0%) said that they received treatment from a doctor or other health care professional; 30.0% said they had treated themselves; and 4.0% said they received no treatment whatsoever.

District comparisons reveal that almost 70% of respondents from Cayo reported not having received an STI test in the last year (68.9%) compared to almost 50% in Orange Walk (49.3%).

Table 35. Reported STI Testing (excluding HIV) in the last 12 Months by District

		District				
		Belize	Cayo	Orange walk	Others	Total
In the last 12 months, have you been tested for a sexually transmitted infection?	Yes	213	99	76	50	438
		40,0%	31,1%	50,7%	35,2%	38,4%
	No	319	219	74	92	704
		60,0%	68,9%	49,3%	64,8%	61,6%
Total		532	318	150	142	1142
		100,0%	100,0%	100,0%	100,0%	100,0%

HIV Testing

About 70% of respondents reported having had an HIV test at some point in their lives (71.5%), however, nearly 30% reported that they had never been tested (27.4%).

Of those who reported being tested for HIV, almost 17% had done so in the last year (16.9%); two thirds within the last two years (66.6%); and 16,5% three years or more ago. 98.2% of persons receiving an HIV test reported having been given the result.

A district comparison reveals that as much as a third of respondents in Cayo have never had an HIV test (33.3%) and Orange Walk reported the highest percentage of respondents having been tested for HIV (80.5%).

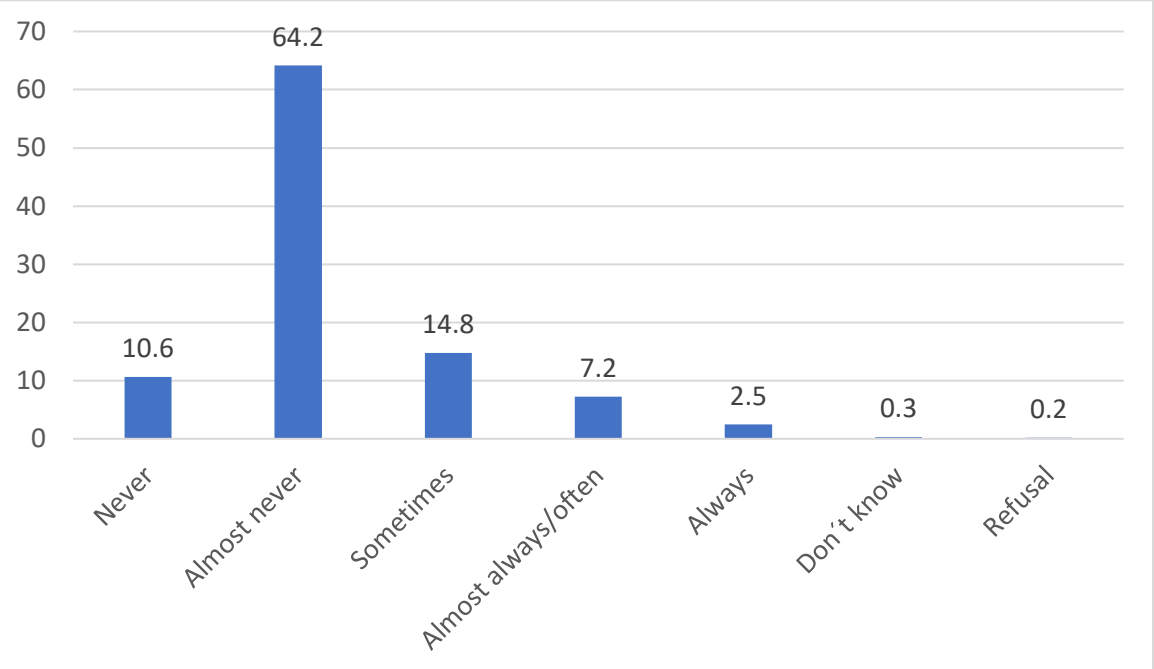
Table 36. Reported Life-time Prevalence of HIV Testing by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Have you ever been tested for HIV infection?	Yes	390	212	120	97	819
		74,4%	66,7%	80,5%	68,3%	72,3%
	No	134	106	29	45	314
		25,6%	33,3%	19,5%	31,7%	27,7%
Total		524	318	149	142	1133
		100,0%	100,0%	100,0%	100,0%	100,0%

Alcohol and Substance Use

About three quarters of respondents, (74.8%) reported drinking alcohol on a regular basis, either daily or weekly.

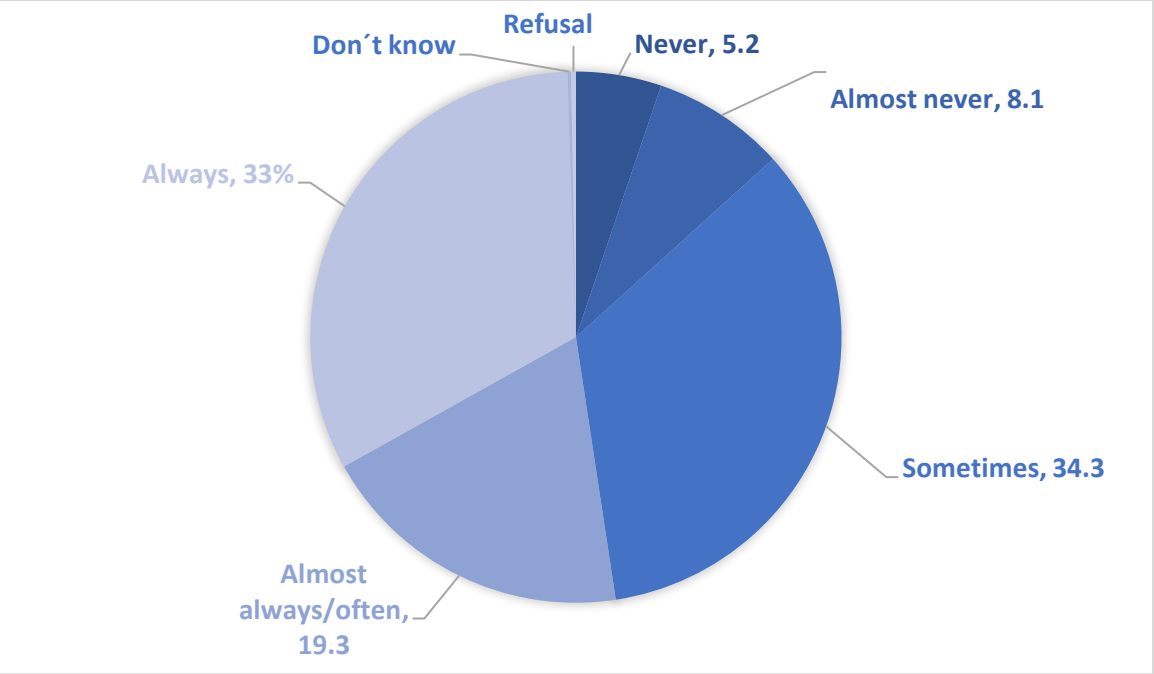
Figure 36. Frequency of Alcohol Consumption in the Last 6 Months



Binge drinking (≥5 drinks on ≥1 occasion) is the most common form of excessive alcohol consumption. Numerous studies have examined the relationship between binge drinking and sexual risk behaviours among MSM[xxiii], and has been correlated with two indicators of risky sex: having multiple sexual partners and having sexual intercourse without a condom.[xxiv]

Over 85% of respondents reported binge drinking always, often or sometimes (86.2%).

Figure 37. Reported Frequency of Binge Drinking



The remoter districts (Corozal, Stann Creek, and Toledo) had collectively a much higher percentage of respondents reporting always engaging in binge drinking than the other districts (41.5%).

Table 37. Reported Frequency of Binge Drinking by District

		District				
		Belize	Cayo	Orange walk	Others	Total
When you drink, how often do you have 5 or more drinks on one occasion?	Never	34	8	12	6	60
		6,4%	2,5%	8,1%	4,2%	5,3%
	Almost never	49	32	7	5	93
		9,2%	10,0%	4,7%	3,5%	8,2%
	Sometimes	188	103	60	42	393
		35,4%	32,3%	40,3%	29,6%	34,4%
	Almost always/often	82	82	27	30	221
		15,4%	25,7%	18,1%	21,1%	19,4%
	Always	178	94	43	59	374
		33,5%	29,5%	28,9%	41,5%	32,8%
Total		531	319	149	142	1141
		100,0%	100,0%	100,0%	100,0%	100,0%

The importance of drug use and its connection to HIV in the Caribbean is not through intravenous drug use as is the case elsewhere. However, new trends involving emergent forms of illicit drug use are currently being documented in many parts of the world, and are likely to become increasingly significant in the Caribbean as well.

The EMIS-Study in Europe[xxv] showed high prevalence of drugs associated with "chemsex" (a term describing sexual relations under the influence of various, mostly psychoactive substances) including amyl nitrates ("poppers") and cannabis amongst MSM. In terms of HIV and sexually transmitted infections (STIs), illicit drug use and chemsex may be linked to an increase in incidence as studies show that drug use is associated with an increase in condomless sex,[xxvi] including among HIV-serodiscordant partners.[xxvii]

Owing to the already lengthy questionnaire for the Population Size Estimate Study, and the lack of available reference data on these newer drug practises in the Caribbean. We limited ourselves in this survey to ask a few questions aimed at identifying substances currently being used by MSM, and Transwomen in Belize. However, we recognise that a separate study looking at substance use among these key populations in Belize is of vital importance.

Over 70% of respondents reported using of Marijuana (cannabis) (72.1%). 27.1% had used cocaine and 17.5% Ecstasy. Crack use (7.2%) and small levels of heroin use (3.1%) were also reported.

Table 38. Reported Substance Use

Substance	f	%
Marijuana	826	72,1
Cocaine	311	27,1
Crack	83	7,2
Heroine	36	3,1
Ecstasy	201	17,5
None	220	19,2
Don´t know	2	,2
Refusal	1	,1
Total	1146	

When asked about injecting drug use, only 5.7% of respondents reported injecting drugs over the last 12 months.

Stigma and Discrimination

From family and friends

Almost one in five respondents (18.5%) indicated that they have felt excluded from family gatherings because of their sexual orientation.

Over a quarter of respondents reported having experienced family members making discriminatory remarks or gossiping about them because they have sex with men (26.1%). Respondents in the remote districts (Corozal, Stann Creek and Toledo) had the highest percentages of respondents' who reported family members making discriminatory remarks or gossiping on account of their sexual orientation (49.3%).

Table 39. Discriminatory Remarks Made by Family Members Reported by Respondents by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Have you ever known or felt that family members have made discriminatory remarks or gossiped about you because you have sex with men?	Yes	201	145	68	68	482
		42,4%	46,8%	45,9%	49,3%	45,0%
	No	273	165	80	70	588
		57,6%	53,2%	54,1%	50,7%	55,0%
Total		474	310	148	138	1070
		100,0%	100,0%	100,0%	100,0%	100,0%

Just over one in five respondents indicated that some family member(s) would not talk to them or refuse to have contact with them because they have sex with men (21.6%).

When it comes to friends, almost a quarter had experienced being rejected by friends because they have sex with men (23.8%); and over 20% had friends that ended their friendship with them upon finding out they have sex with men (21.9%).

From health care services

A third of respondents refer they fear or avoid accessing health services due to concerns that someone will discover they have sex with men (33.1%). The highest percentage of respondents reporting fear of accessing health services due to fear of having their sexual orientation disclosed were from the remoter districts of Corozal, Stann Creek and Toledo (39.3%).

Table 40. Avoidance of Accessing Health Services for Fear of Being Outed by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Have you ever felt afraid, nervous or avoided going to health care services because you worry someone may discover you have sex with men?	Yes	163	111	50	55	379
		31,7%	35,1%	33,3%	39,3%	33,8%
	No	351	205	100	85	741
		68,3%	64,9%	66,7%	60,7%	66,2%
Total		514	316	150	140	1120
		100,0%	100,0%	100,0%	100,0%	100,0%

13.6% of respondents reported having felt that they were not treated well in a health facility because of their sexual orientation. 32.6% indicated having personally experienced an episode at a health facility where a staff member "gossiped" about them or someone else related to being MSM. Orang Walk district had the lowest percentage of respondents report an experience of being poorly treated at a health facility because of their sexual orientation, and it was lowest in Grenada (14.5%). Just over 7% of respondents reported HAVING HAD health services denied to them because of their sexual orientation (7.2%)

Table 41. Reported Ill-treatment in Healthcare Facilities by Respondents by Country

		District				
		Belize	Cayo	Orange walk	Others	Total
Have you ever heard health care providers gossiping about you or another patient because of having sex with men?	Yes	176	122	21	55	374
		35,3%	38,7%	14,5%	39,3%	34,0%
	No	323	193	124	85	725
		64,7%	61,3%	85,5%	60,7%	66,0%
Total		499	315	145	140	1099
		100,0%	100,0%	100,0%	100,0%	100,0%

From the authorities

Almost 17% of respondents felt that the police refused to protect them because of being MSM (16.7%). A 4.3% of respondents reported being detained or arrested on charges related to homosexuality or other related charge.

From society

Almost a half of respondents reported being verbally harassed or insulted by someone for being MSM (49.4%); and 22.2% report that someone attempted to blackmail them because they were MSM. Respondents in the remoter districts (Corozal, Stann Creek and Toledo) reported in higher

percentages having been on the receiving end of verbal harassment related to their sexual orientation.

Table 42. Reported Verbal Harassment and Insults Related to Sexual Orientation by Country

		District				
		Belize	Cayo	Orange walk	Others	Total
Has someone ever verbally harassed or insulted you and you felt it was because you have sex with men?	Yes	260	162	65	79	566
		48,8%	50,6%	43,6%	56,8%	49,6%
	No	273	158	84	60	575
		51,2%	49,4%	56,4%	43,2%	50,4%
Total		533	320	149	139	1141
		100,0%	100,0%	100,0%	100,0%	100,0%

23.6% of respondents reported being physically hurt (pushed, shoved, slapped, hit, kicked, choked or otherwise physically hurt) by someone for being MSM.

Finally, almost a third of respondents reported feeling scared sometimes walking around in public places because of the treatment they might receive for being MSM (29.8%). Once again, this was more so for the respondents in the remoter district than elsewhere. (36.6%).

Table 43. Reported Fear of Walking Around in Public Places on Account of Sexual Orientation

		District				
		Belize	Cayo	Orange walk	Others	Total
Have you ever felt scared to walk around in public places because of the treatment you might receive for having sex with men?	Yes	146	90	54	52	342
		27,5%	28,3%	36,2%	36,6%	30,0%
	No	385	228	95	90	798
		72,5%	71,7%	63,8%	63,4%	70,0%
Total		531	318	149	142	1140
		100,0%	100,0%	100,0%	100,0%	100,0%

Sexual Abuse

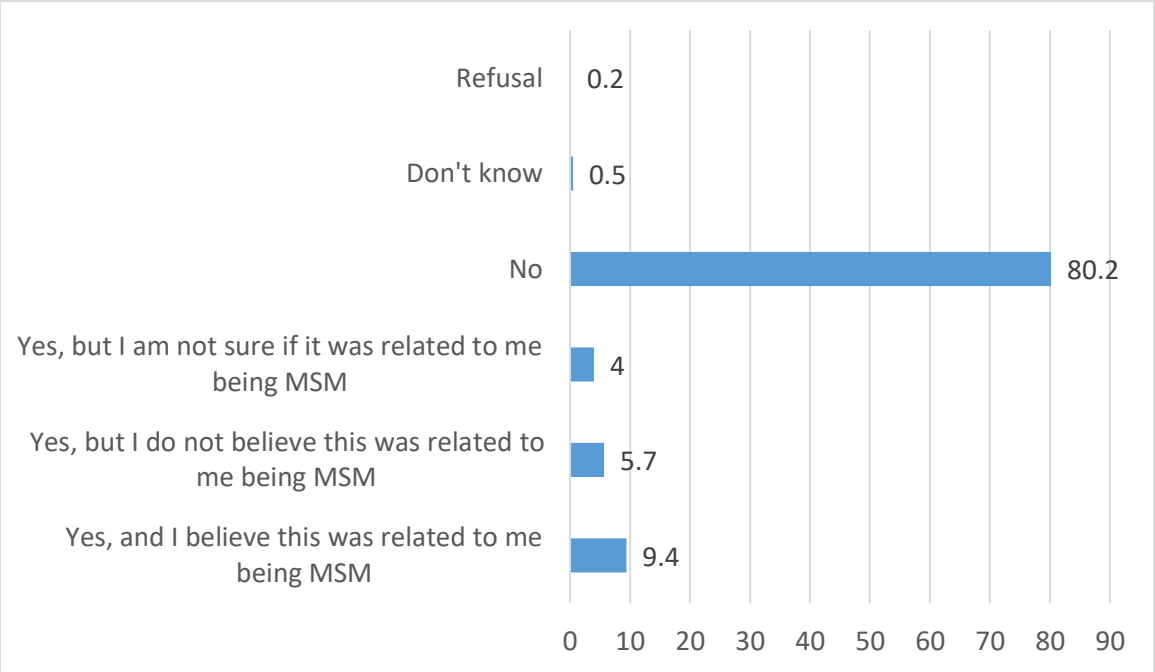
Evidence exists to suggest that sexual assault of males is not just limited to prison settings, and may be higher than what one might expect.[xxviii] Although little data is available on sexual abuse in males in the Caribbean, large studies in the general population in the US estimate prevalence

to be around 16%[xxix] with higher prevalence's in persons who are LGBT.[xxx] About 19.2% of the MSM and Trans women respondents in this study reported sexual abuse, with 9.4% of whom believed this was directly related to their sexual orientation. A quarter of respondents reported that the sexual abuse had occurred in the last 12 months (25.1%). Higher reports of sexual abuse were reported in the remoter districts and the lowest in Cayo district.

Figure 38. Reported Sexual Assault by District

		District				
		Belize	Cayo	Orange walk	Others	Total
Has someone ever forced you to have sex when you did not want to?	Yes	100 18,9%	52 16,3%	32 21,5%	35 25,0%	219 19,2%
	No	430 81,1%	267 83,7%	117 78,5%	105 75,0%	919 80,8%
Total		530 100,0%	319 100,0%	149 100,0%	140 100,0%	1138 100,0%

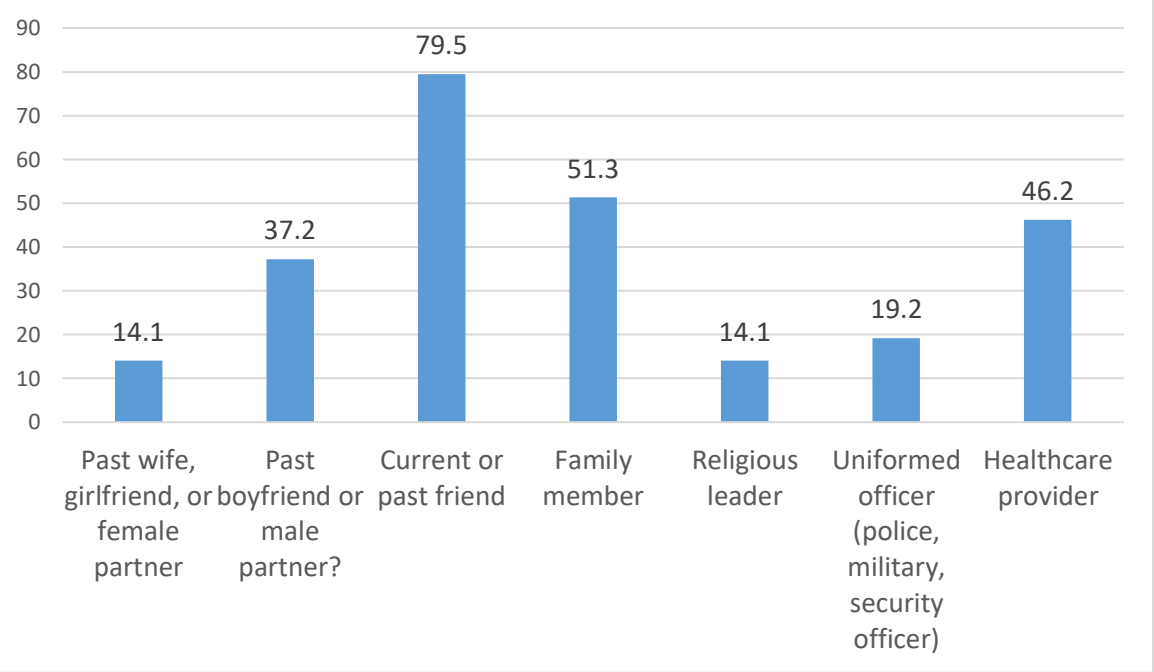
Figure 39. Reported Sexual Assault and its Relation to Sexual Orientation



Those who were forced to have sex were asked whether they told anyone, 64.0% did not do so. Of the 35.1% who had told someone, the details of whom they told are presented in the figure below.

Figure 40. Who Respondents Told About their Sexual Assault

Note: Multiple-answer question so percentages add up to more than 100%.



90.2% of respondents reported that none of the perpetrators in relation to the sexual assault were arrested or prosecuted.

Abuse from Partners

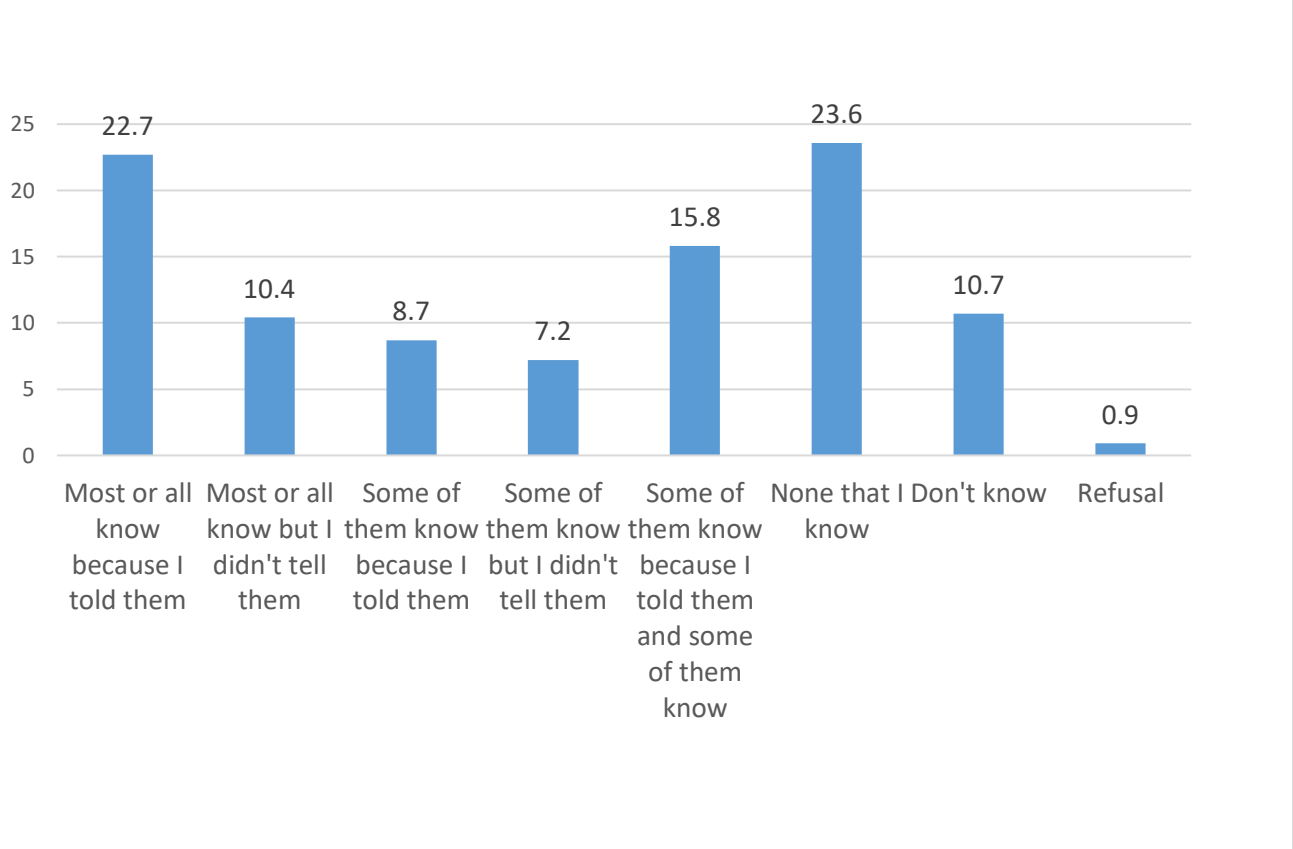
Almost 30% of respondents reported having been physically, emotionally, or mentally abused by a partner in a relationship at some point (28.8%).

About 84% had experienced insults and threats from a partner (83.9%).Almost 20% reported their partner withholding housekeeping money or goods from them (19.5%); about a third reported having been stopped from going out by a partner (31.8%). Almost 60% indicated that they had been sexually ignored by a partner (57.6%); about 55% reported that their partner had kept them away from friends/family members (54.8%). Almost half reported having been physically beaten by a partner (48.5%); and near 30% had experienced rape or sexual abuse from a partner (29.4%).

Work Place

Respondents were asked whether at work they would say that their co-workers know that they have sex with men or about their gender identity. About 24% said no, as far as they were aware (23.6%), however a similar percentage reported most or all because they had told them (22.7%).

Figure 41. Extent to Which Work Colleagues Know about Your Sexual Orientation



When asked about whether they think their co-workers would be accepting of them if they found out they were MSM, just under a third felt that most or all of them would be accepting (30.7%); 11.3% believed that none of them would accept it.

A 13.4% felt that they had overtly been denied a job because of their sexual orientation.

Mental and Emotional Health

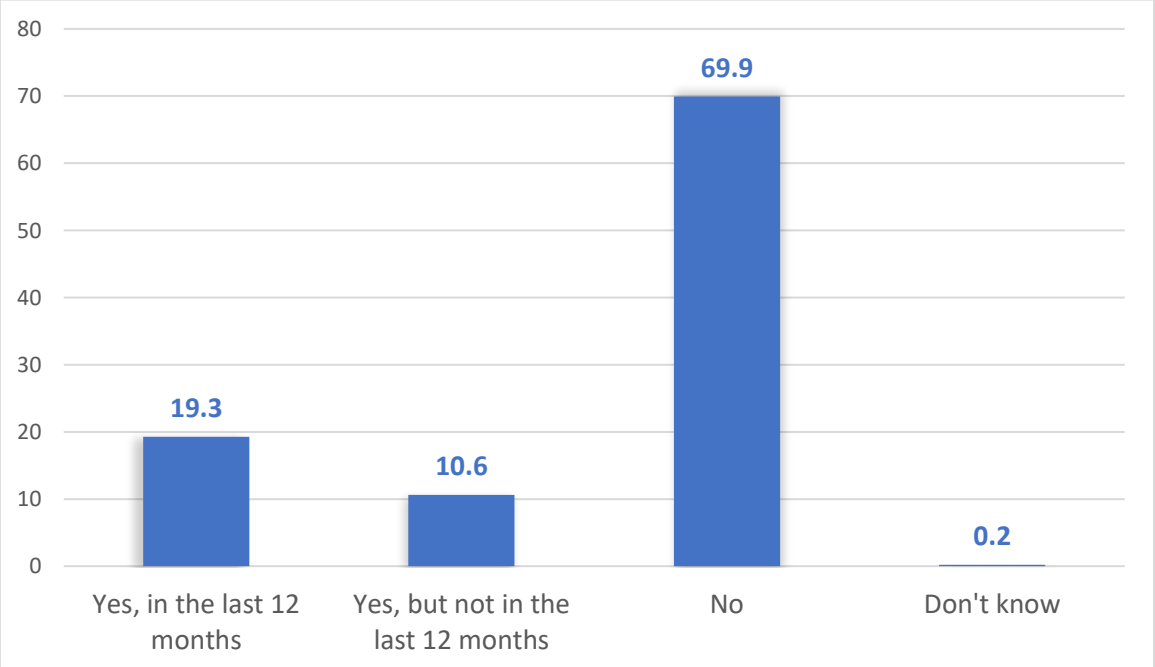
The majority of respondents rated their overall mental health to be good or excellent (90.4%), although 8.6% did consider it to be only fair or poor, and this percentage increased to 20.1% when referring to their current mental health situation.

CHARACTERIZATION OF MSM AND TRANS SUBGROUPS

Key Findings for MSM and Transwomen Sex Workers

Just under 30% of respondents indicated that they had sold sex for money (29.8%) to other men; 19.3% reported they had done so within the last 12 months. The results pertaining to this section correspond to the responses supplied by individuals who indicated their involvement in sex work. For just over 20% of these respondent's, earnings from Sex Work made up from all to over half of their weekly income (20,2%).

Figure 42. Engagement in Sex Work

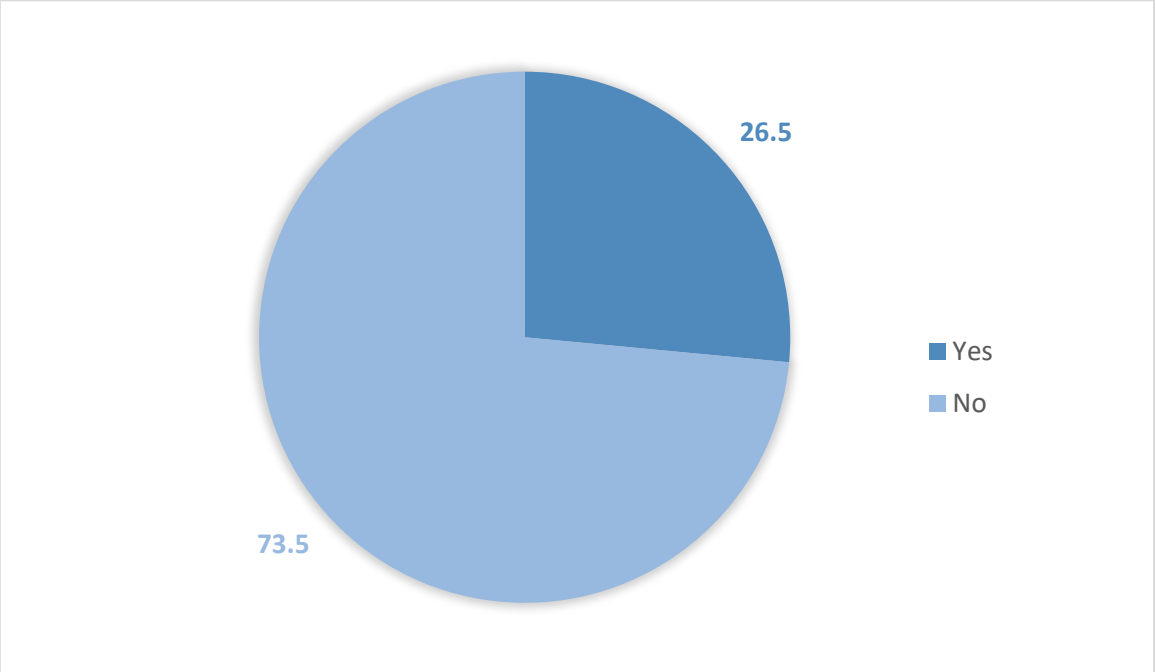


Sex Work versus Transactional Sex

56.3% reported having had male paying partners, 12.2% female paying partners, and the same percentage reported trans women paying partners.

42,8% had male partners who offered goods/favours in exchange for sex, and 8.5% reported having female partners who offered goods/favours in exchange for sex.
The percentage of respondents reporting that partners who pay them money for sex exceeds those who offer them goods/favours/benefits (see figure below).

Figure 43. Paying Partners, Money versus Goods/Favours/Benefits



The 22% of respondents reported having a 'paying partner' use violence or force to have sex against their will, and 17% reported that this had occurred in the last 12 months.

Socio-Demographic Characteristics of MSM and Trans women Sex Workers

Table 44. Sex Work and Age

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Age	16-24 years old	105	43	351	499
		47,5%	35,2%	43,8%	43,6%
	25-40 years old	99	66	355	520
		44,8%	54,1%	44,3%	45,5%
	41 and more years old	17	13	95	125
		7,7%	10,7%	11,9%	10,9%
Total		221	122	801	1144
		100,0%	100,0%	100,0%	100,0%

As might be expected active involvement in MSM sex work is primarily associated with younger MSM with only 7.7% of MSM and Trans Sex Workers being over 41 years of age. The largest percentage of Sex Workers lived in Belize district which includes the Cayes (41.2%), and the lowest concentration reported living in the remote districts of Corozal, Stann Creek and Toledo (17.6%).

Table 45. Sex Work and District of Residence

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
District	Belize	91	56	387	534
		41,2%	45,9%	48,3%	46,7%
	Cayo	48	32	240	320
		21,7%	26,2%	30,0%	28,0%
	Orange walk	43	11	95	149
		19,5%	9,0%	11,9%	13,0%
	Others	39	23	79	141
		17,6%	18,9%	9,9%	12,3%
Total		221	122	801	1144
		100,0%	100,0%	100,0%	100,0%

Respondents engaging in Sex Work in the last 12 months were more likely to report not to currently practice a religion (66.1% versus 56.6%).

Table 46. Sex Work and Practising Religion

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Currently practice a religion	Yes	75	59	347	481
		33,9%	48,4%	43,4%	42,1%
	No	146	63	452	661
		66,1%	51,6%	56,6%	57,9%
Total		221	122	799	1142
		100,0%	100,0%	100,0%	100,0%

They were also more likely to belong to lower socio-economic classes (44.3%) versus 13.7% from higher income bracket.

Table 47. Income and Sex Work

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
About how much money do you earn per month in BZ dollars?	Lowest income	97	35	251	383
		44,3%	28,7%	31,6%	33,7%
	Middle income	92	67	365	524
		42,0%	54,9%	46,0%	46,2%
	Highest income	30	20	178	228
		13,7%	16,4%	22,4%	20,1%
Total		219	122	794	1135
		100,0%	100,0%	100,0%	100,0%

Proportionately a high percentage of respondents identifying as transgender report involvement in sex work in the last 12 months.

Table 48. Gender Identity and Sex Work

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
What do you consider your gender to be: male, female, trans or other?	Male	170	102	736	1008
		79,1%	85,0%	92,8%	89,4%
	Female	15	7	29	51
		7,0%	5,8%	3,7%	4,5%
	Trans	30	11	28	69
		14,0%	9,2%	3,5%	6,1%
Total		215	120	793	1128
		100,0%	100,0%	100,0%	100,0%

A high percentage of those actively engaged in Sex Work (last 12 months) reported to be "Down Low" (45.1%).

Table 49. Sub-Group Identity and Sex Work

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Which sub-group of MSM do you most identify with?	MSM who is out and proud about his/her sexual orientation	45 24,5%	39 36,4%	210 27,5%	294 27,9%
	MSM who is somewhat open about his/her sexual orientation	56 30,4%	44 41,1%	323 42,3%	423 40,1%
	MSM who is very much on the Down Low	83 45,1%	24 22,4%	230 30,1%	337 32,0%
Total		184 100,0%	107 100,0%	763 100,0%	1054 100,0%

Sexual Behaviour and Sex Work

Individuals involved in sex work were two and a half times more likely to report that their first sexual relationship was involuntary compared to respondents not involved in sex work.

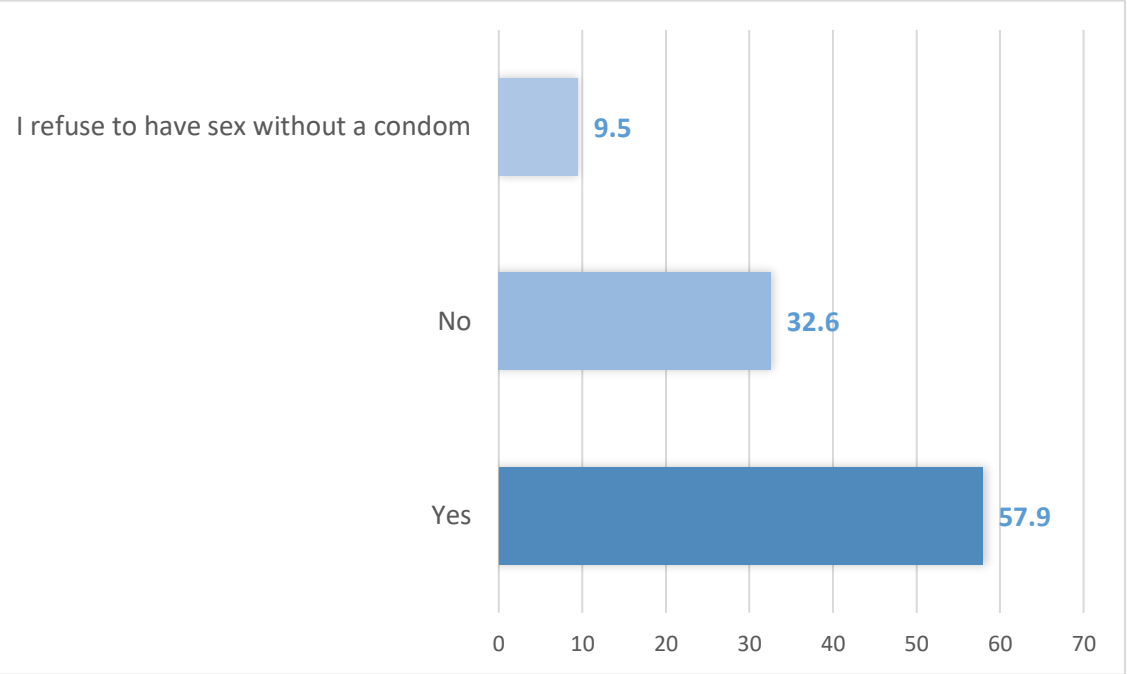
Table 50. Involuntary Nature of First Sexual Episode and Sex Work

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Voluntarily agreed first sexual episode	Yes	184 84,4%	96 83,5%	726 93,6%	1006 90,7%
	No	34 15,6%	19 16,5%	50 6,4%	103 9,3%
Total		218 100,0%	115 100,0%	776 100,0%	1109 100,0%

MSM and Transwomen Sex Workers were more likely to report having had anal sex with an MSM or transwomen than non-sex worker respondents (95.0% versus 87.3%). They were also more likely to have engaged in anal sex with another man or transwoman than non-sex worker respondents.

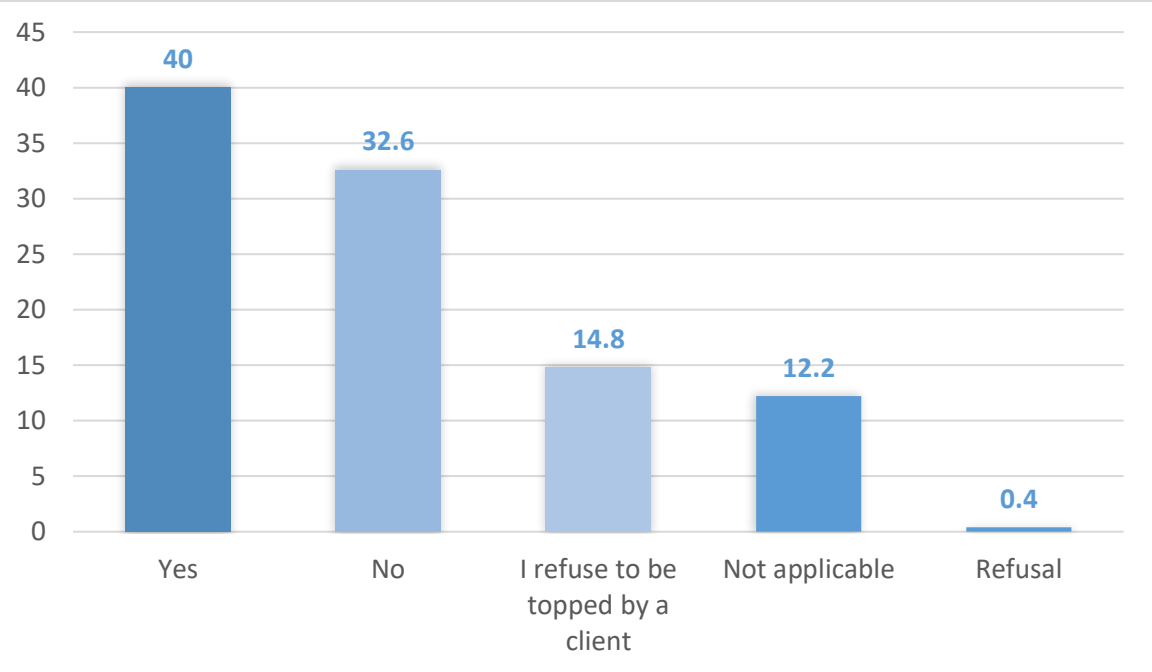
About 58% of Sex Worker respondents reported being offered more money, favours or goods to have sex without a condom with a 'paying partner' (57.9%).

Figure 44. Clients Offering More Money for Unprotected Sex



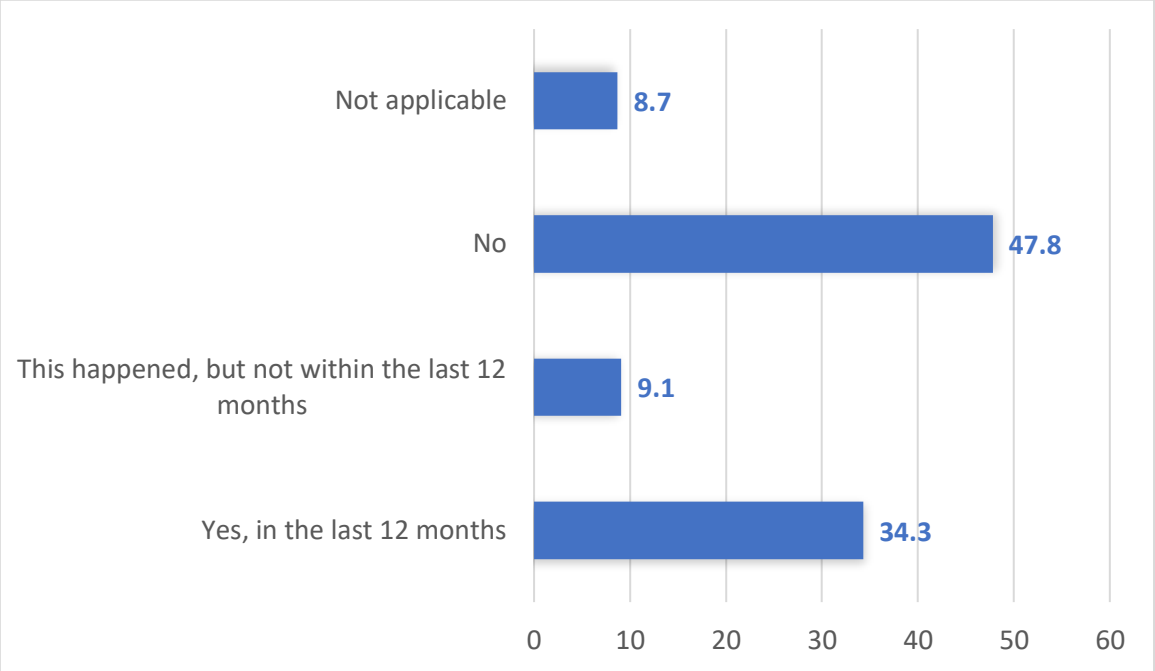
The 40% of Respondents reported charging more to be topped by a "paying partner".

Figure 45. Do You Charge More for Being Topped by a 'Paying Partner'?



A 43.3% of respondents reported having had 'paying partners' who agreed to have sex with a condom, subsequently remove it or refuse to use it. Just over 9% reported that this has happened within the last 12 months (9.1%).

Figure 46. "Paying Partner" Agreeing to Sex with a Condom, but then Removing or Refusing to Use It



Sex Worker respondents reported having multiple concurrent female sexual partners in higher percentages than non-sex worker participants did.

Table 51. Sex Work and Multiple Concurrent Female Sex Partners

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Multiple partners: 2-3 female partners	Selected	37 16,7%	13 10,7%	75 9,4%	125 10,9%
	No selected	184 83,3%	109 89,3%	726 90,6%	1019 89,1%
Total		221 100,0%	122 100,0%	801 100,0%	1144 100,0%

Access to Condoms

MSM and Transwomen Sex Workers selling sex in the last 12 months were more than twice as likely to report that condoms were very or somewhat difficult to access than other respondents (11% versus 5.2% for non-sex worker respondents).

Table 52. Access to Condoms

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
How easy is it for you to get condoms when you need them?	Very difficult	10	1	10	21
		4,6%	,8%	1,3%	1,9%
	Somewhat difficult	14	3	31	48
		6,4%	2,5%	3,9%	4,3%
	Neither difficult nor easy	12	4	11	27
		5,5%	3,3%	1,4%	2,4%
	Somewhat easy	52	26	159	237
		23,7%	21,7%	20,2%	21,0%
	Very easy	131	86	577	794
		59,8%	71,7%	73,2%	70,5%
Total		219	120	788	1127
		100,0%	100,0%	100,0%	100,0%

HIV Knowledge and HIV Testing

Knowledge about sexual risk was also poorer with respondents selling sex within the last year compared to non-sex worker respondents, with just over a third correctly identifying anal sex as the sexual practice carrying greatest risk (37.2%), compared to 47.4% for non-sex worker respondents.

Table 53. Sexual Practises and HIV Transmission Risk

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
What type of sex puts you most at risk for HIV infection?	Vaginal sex	21 9,6%	4 3,4%	22 2,8%	47 4,2%
	Anal sex	81 37,2%	58 48,7%	370 47,4%	509 45,5%
	Oral sex	7 3,2%	0 ,0%	15 1,9%	22 2,0%
	All carry equal risk	109 50,0%	57 47,9%	374 47,9%	540 48,3%
Total		218 100,0%	119 100,0%	781 100,0%	1118 100,0%

Furthermore, sex workers active in the last 12 months were less likely to have had an HIV test than non-sex worker respondents (79.2% versus 70.7% respectively).

Table 54. Life-time Prevalence of HIV testing

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Have you ever been tested for HIV infection?	Yes	171 79,2%	86 71,1%	561 70,7%	818 72,3%
	No	45 20,8%	35 28,9%	233 29,3%	313 27,7%
Total		216 100,0%	121 100,0%	794 100,0%	1131 100,0%

Substance Use

Respondents engaged in sex work within the last 12 months were almost three times more likely than non-sex worker respondents to drink alcohol on a daily basis than non-sex worker respondents (21.8% versus 7.7%.)

Table 55. Frequency of Alcohol Consumption over Last 6 Months

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
During the last 6 months, how often have you had drinks containing alcohol?	Every day	48 21,8%	13 10,7%	61 7,7%	122 10,7%
	At least once a week	123 55,9%	86 71,1%	525 65,9%	734 64,5%
	At least once a month	33 15,0%	14 11,6%	123 15,4%	170 14,9%
	Less than once a month	13 5,9%	7 5,8%	63 7,9%	83 7,3%
	Never	3 1,4%	1 ,8%	25 3,1%	29 2,5%
Total		220 100,0%	121 100,0%	797 100,0%	1138 100,0%

Stigma and Discrimination

Sex workers reported in higher percentages having heard family members make discriminatory remarks or gossiped about them because of their sexual orientation than non-sex worker respondents.

Table 56. Family Members Making Discriminatory Remarks

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Have you ever known or felt that family members have made discriminatory remarks or gossiped about you because you have sex with men?	Yes	104 50,7%	64 55,7%	313 41,8%	481 45,0%
	No	101 49,3%	51 44,3%	435 58,2%	587 55,0%
Total		205 100,0%	115 100,0%	748 100,0%	1068 100,0%

They were also more likely to report feeling scared to walk around in public places because of how they might be treated.

Table 57. Fear of Walking around in Public Places

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Have you ever felt scared to walk around in public places because of the treatment you might receive for having sex with men?	Yes	82	48	211	341
		37,3%	40,3%	26,4%	30,0%
	No	138	71	588	797
		62,7%	59,7%	73,6%	70,0%
Total		220	119	799	1138
		100,0%	100,0%	100,0%	100,0%

Sex Worker respondents reported higher percentages of verbal harassment (55.9 and 63.9 versus 45.5%)

Table 58. Verbal Harrassment

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Has someone ever verbally harassed or insulted you and you felt it was because you have sex with men?	Yes	123	78	363	564
		55,9%	63,9%	45,5%	49,5%
	No	97	44	434	575
		44,1%	36,1%	54,5%	50,5%
Total		220	122	797	1139
		100,0%	100,0%	100,0%	100,0%

They reported almost three times more than non-sex workers having been forced to have sex against their will (35.3% versus 13.4%).

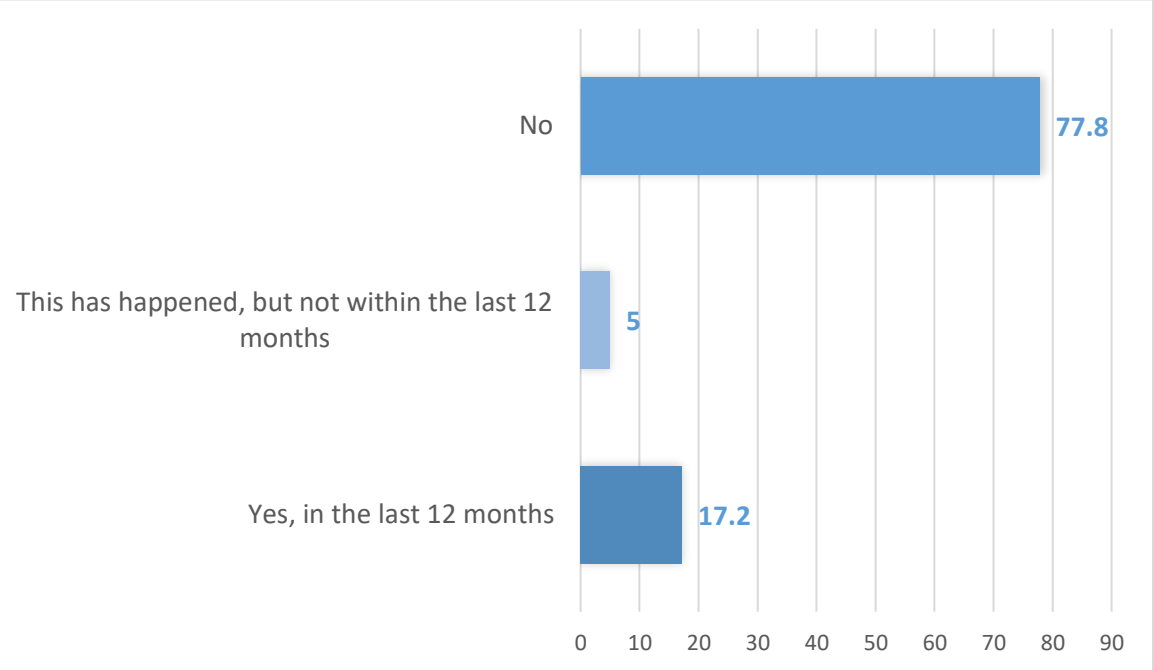
Sexual and Physical Abuse

Table 59. Forced to Have Sex against Their Will

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Has someone ever forced you to have sex when you did not want to?	Yes	78 35,3%	33 27,7%	107 13,4%	218 19,2%
	No	143 64,7%	86 72,3%	689 86,6%	918 80,8%
Total		221 100,0%	119 100,0%	796 100,0%	1136 100,0%

22.2% of MSM and Transgender Women Sex Workers reported client violence and forced sex, with 17.2% of these instances occurring during the last 12 months.

Figure 47. Client Violence and Forced Sex



Sex workers were more likely to report being physically, emotionally or mentally abused by a partner than their non-sex worker counterparts.

Table 60. Experiences of Physical, Emotional and/or Mental Abuse by Partner

		Have you ever exchanged or sold sex for money, favors, or goods?			
		Yes in last 12 months	Yes, but not in last 12 months	No	Total
Have you ever been physically, emotionally, or mentally abused by a partner in a relationship?	Yes	84	45	200	329
		38,0%	36,9%	25,1%	28,9%
	No	137	77	596	810
		62,0%	63,1%	74,9%	71,1%
Total		221	122	796	1139
		100,0%	100,0%	100,0%	100,0%

Key Findings Box for Young MSM and Trans (YMSM/T)

Young men who have sex with men and trans (YMSM/T) in this study refers to biological males 16–24 years of age. In this section we compare results for YMSM/T with older or mature MSM and Trans (MMSM/T) that we define to be MSM and trans women 41 years of age or older.

Socio-demographic Data

YMSM/T were almost half as likely to live alone (30.7%) than MMSM/T (57.6%).

Table 61. Living Alone Related to Age

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Lives alone	Yes	154	264	72	490
		30,7%	50,8%	57,6%	42,8%
	No	347	256	53	656
		69,3%	49,2%	42,4%	57,2%
Total		501	520	125	1146
		100,0%	100,0%	100,0%	100,0%

A third of YMSM/T reported their sexual orientation as bisexual and less likely to identify as heterosexual when compared to older age respondents.

Table 62. Sexual Orientation and Age

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
What do you consider your sexual orientation?	Gay or homosexual	262	284	59	605
		52,8%	55,1%	48,0%	53,4%
	Bisexual	166	131	36	333
		33,5%	25,4%	29,3%	29,4%
	Heterosexual	35	52	24	111
		7,1%	10,1%	19,5%	9,8%
	Transgender	33	48	4	85
		6,7%	9,3%	3,3%	7,5%
Total		496	515	123	1134
		100,0%	100,0%	100,0%	100,0%

YMSM/T reported more so than other age groups to be MSM who are somewhat open about their sexual orientation, whilst MMSM/T were more likely to describe themselves as Down Low (DL).

Table 63. Self-Characterization of MSM and Age

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Which sub-group of MSM do you most identify with?	MSM who is out and proud about his/her sexual orientation	128 27,5%	138 29,2%	29 24,4%	295 27,9%
	MSM who is somewhat open about his/her sexual orientation	205 44,1%	182 38,6%	36 30,3%	423 40,1%
	MSM who is very much on the Down Low	132 28,4%	152 32,2%	54 45,4%	338 32,0%
Total		465 100,0%	472 100,0%	119 100,0%	1056 100,0%

YMSM/T were more likely to report having disclosed to family and friends than MMSM/T.

Table 64. Disclosure of Sexual Orientation and Age

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Have you voluntarily told any member of your family or friends that you have sex with men or that you are trans?	Yes	291 58,2%	303 58,4%	53 42,4%	647 56,6%
	No	209 41,8%	216 41,6%	72 57,6%	497 43,4%
Total		500 100,0%	519 100,0%	125 100,0%	1144 100,0%

YMSM/T were almost twice as likely as MMSM/T to reciprocate in oral sex than older MSM/T.

Table 65. Exclusive Engagement in Recipient Oral Sex

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
I only allow men/trans to do oral sex on me	Yes	79	75	36	190
		15,8%	14,4%	28,8%	16,6%
	Not selected	422	445	89	956
		84,2%	85,6%	71,2%	83,4%
Total		501	520	125	1146
		100,0%	100,0%	100,0%	100,0%

YMSM/T were less likely in the last 3 months to never or almost never use a condom when topping a sexual partner (12.2%) than MMSM/T (18.5%).

Table 66. Age and Condom Use in Last 3 Months When Topping

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
In the last 3 months, how often were condoms used when you topped a man?	Never	33	43	8	84
		11,2%	14,6%	14,8%	13,0%
	Almost never	3	7	2	12
		1,0%	2,4%	3,7%	1,9%
	Sometimes	80	49	9	138
		27,1%	16,6%	16,7%	21,4%
	Almost always/often	36	41	13	90
		12,2%	13,9%	24,1%	14,0%
	Always	143	155	22	320
		48,5%	52,5%	40,7%	49,7%
Total		295	295	54	644
		100,0%	100,0%	100,0%	100,0%

They were also less likely in the last 3 months to never or almost never use a condom when being topped by a sexual partner (11.4%) than MMSM/T (17.7%).

Table 67. Age and Condom Use in Last 3 Months When Being Topped

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
In the last 3 months, how often did you use condoms when you were topped?	Never	32 11,1%	46 16,1%	6 13,3%	84 13,5%
	Almost never	1 ,3%	15 5,2%	2 4,4%	18 2,9%
	Sometimes	72 24,9%	51 17,8%	13 28,9%	136 21,9%
	Almost always/often	38 13,1%	47 16,4%	9 20,0%	94 15,2%
	Always	146 50,5%	127 44,4%	15 33,3%	288 46,5%
Total		289 100,0%	286 100,0%	45 100,0%	620 100,0%

YMSM/T reported more than MMSM/T to have engaged in insertive and receptive anal sex (being versatile) (40.7%) than MMSM/T (26.4%).

Table 68. Sexual Role and Age over Last 3 Months.

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Insertive or receptive anal sex with men in last 3 months	Just insertive anal sex with men	93 18,6%	103 19,8%	20 16,0%	216 18,8%
	Just receptive anal sex with men	87 17,4%	95 18,3%	13 10,4%	195 17,0%
	Insertive and receptive anal sex with men	204 40,7%	193 37,1%	33 26,4%	430 37,5%
	No anal sex in last 3 months	37 7,4%	42 8,1%	18 14,4%	97 8,5%
	No anal sex ever	69 13,8%	56 10,8%	23 18,4%	148 12,9%
	Refusal or undefined	11 2,2%	31 6,0%	18 14,4%	60 5,2%
Total		501 100,0%	520 100,0%	125 100,0%	1146 100,0%

YMSM/T were less likely to report ever having sex with a woman than MMSM/T.

Table 69. Life-time Prevalence of Sex with a Woman

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Have you ever had any type of sex with a woman?	Yes	242 48,3%	289 55,6%	97 77,6%	628 54,8%
	No	259 51,7%	231 44,4%	28 22,4%	518 45,2%
Total		501 100,0%	520 100,0%	125 100,0%	1146 100,0%

Although YMSM/T were more likely to have had vaginal or anal sex with a women in the last 12 months (60.7%) than MMSM/T (47.4%).

Table 70. Age and Sex with Female Partner in Last 12 Months

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
In the last 12 months, have you had vaginal or anal sex with a woman?	Yes	147 60,7%	139 48,1%	46 47,4%	332 52,9%
	No	95 39,3%	150 51,9%	51 52,6%	296 47,1%
Total		242 100,0%	289 100,0%	97 100,0%	628 100,0%

YMSM/T were more than 4 times less likely to have reported never using a condom when having vaginal sex with a woman in the last 12 months than MMSM/T.

Condom and Lubricant Use

YMSM/T where much less likely than MMSM/T to report never using a condom with female partners (13.1% versus 56.8%)

Table 71. Age and Condom Use in Vaginal Sex with a Woman over Last 12 Months

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Of the times you had vaginal sex with a woman in the last 12 months, how often was a condom used?	Never	19 13,1%	33 25,2%	25 56,8%	77 24,1%
	Almost never	10 6,9%	11 8,4%	3 6,8%	24 7,5%
	Sometimes	38 26,2%	32 24,4%	5 11,4%	75 23,4%
	Almost always/often	19 13,1%	14 10,7%	1 2,3%	34 10,6%
	Always	59 40,7%	41 31,3%	10 22,7%	110 34,4%
Total		145 100,0%	131 100,0%	44 100,0%	320 100,0%

Just over a third of YMSM/T (34.5%) compared to almost half (49.6%) of MMSM/T reported they never used lubricants during sex.

Table 72. Age and Lubricant Use during Sex

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Have you ever used lubricants during sex?	Yes, but only without condoms	53 10,6%	40 7,7%	7 5,6%	100 8,7%
	Yes, but only with condoms	132 26,5%	119 22,9%	27 21,6%	278 24,3%
	Yes, both with and without condoms	142 28,5%	188 36,2%	29 23,2%	359 31,4%
	No	172 34,5%	172 33,1%	62 49,6%	406 35,5%
Total		499 100,0%	519 100,0%	125 100,0%	1143 100,0%

HIV Knowledge

Table 73. Age and Sexual Risk of Different Sexual Acts

YMSM/T were overall somewhat more knowledgeable than older MSM about the risk involved with different sexual roles, with a higher percentages of YMSM/T recognising anal sex as

carrying the greatest risk for HIV transmission and lower percentages believing that all sexual acts carry equal risk.

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
What type of sex puts you most at risk for HIV infection?	Vaginal sex	31	12	4	47
		6,3%	2,4%	3,3%	4,2%
	Anal sex	213	249	49	511
		43,5%	48,8%	40,8%	45,6%
	Oral sex	11	10	1	22
		2,2%	2,0%	,8%	2,0%
	All carry equal risk	235	239	66	540
		48,0%	46,9%	55,0%	48,2%
Total		490	510	120	1120
		100,0%	100,0%	100,0%	100,0%

YMSM/T were more likely to have ever been tested for HIV (66.9%) than older MSM/T (59.5%); and MSM/T between the ages of 25 and 40 reported the highest rates of HIV testing.

Table 74. Life-time Prevalence of HIV Testing

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Have you ever been tested for HIV infection?	Yes	332	415	72	819
		66,9%	80,4%	59,5%	72,3%
	No	164	101	49	314
		33,1%	19,6%	40,5%	27,7%
Total		496	516	121	1133
		100,0%	100,0%	100,0%	100,0%

Substance Use

YMSM/T were over three times less likely to consume alcohol on a daily basis than MMSM/T.

Table 75. Age and Frequency of Alcohol Consumption in Last 6 Months

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
During the last 6 months, how often have you had drinks containing alcohol?	Every day	32	64	26	122
		6,4%	12,4%	20,8%	10,7%
	At least once a week	318	345	73	736
		64,0%	66,6%	58,4%	64,6%
	At least once a month	86	67	17	170
		17,3%	12,9%	13,6%	14,9%
	Less than once a month	45	31	7	83
		9,1%	6,0%	5,6%	7,3%
	Never	16	11	2	29
		3,2%	2,1%	1,6%	2,5%
Total		497	518	125	1140
		100,0%	100,0%	100,0%	100,0%

Stigma and Discrimination

YMSM/T were more likely to report family members making discriminatory remarks or gossiping about them on account of their sexual orientation (46.1%) compared to MMSMMSM/T (30,8%).

Table 76. Family Members Making Discriminatory Remarks or Gossiping on Account of Sexual Orientation

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Have you ever known or felt that family members have made discriminatory remarks or gossiped about you because you have sex with men?	Yes	211	235	36	482
		46,1%	47,5%	30,8%	45,0%
	No	247	260	81	588
		53,9%	52,5%	69,2%	55,0%
Total		458	495	117	1070
		100,0%	100,0%	100,0%	100,0%

YMSM/T were more likely to report avoidance of healthcare facilities due to concerns of disclosure of sexual orientation (37.5%) than MMSM/T (29.2%).

Table 77. Age and Avoidance of Healthcare Facilities for Fear of Disclosure of Sexual Orientation.

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Have you ever felt afraid, nervous or avoided going to health care services because you worry someone may discover you have sex with men?	Yes	183 37,5%	161 31,4%	35 29,2%	379 33,8%
	No	305 62,5%	351 68,6%	85 70,8%	741 66,2%
Total		488 100,0%	512 100,0%	120 100,0%	1120 100,0%

YMSM/T were almost three fold more likely to report scared to walk around in public places on account of their sexual orientation (31.2%) than MMSM/T (12.0%).

Table 78. Scared to Walk around in Public Places on Account of Sexual Orientation

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Have you ever felt scared to walk around in public places because of the treatment you might receive for having sex with men?	Yes	155 31,2%	172 33,2%	15 12,0%	342 30,0%
	No	342 68,8%	346 66,8%	110 88,0%	798 70,0%
Total		497 100,0%	518 100,0%	125 100,0%	1140 100,0%

They were also more likely than MMSM/T to report being verbally harassed or insulted (50.5% versus 38.7%).

Table 79. Age and Experiencing Being Verbally Harassed or Insulted

		Age			
		16-24 years old	25-40 years old	41 and more years old	Total
Has someone ever verbally harassed or insulted you and you felt it was because you have sex with men?	Yes	252 50,5%	266 51,4%	48 38,7%	566 49,6%
	No	247 49,5%	252 48,6%	76 61,3%	575 50,4%
Total		499 100,0%	518 100,0%	124 100,0%	1141 100,0%

Key Findings Box for Transgender Women (Includes Respondents Reporting Female Gender Identity)

A Transgender woman, sometimes shortened to a trans woman, is an umbrella term that describes a biological male whose gender identity and/or expression do not match the sex they were assigned at birth. We use gender identity in this report to refer to a person's internal, deeply felt sense of being male or female, or something other than, or in between male and female. By gender expression, we refer to the external characteristics and behaviours which society define as "masculine" or "feminine", including such attributes as dress, appearance, mannerisms, speech patterns, and social behaviour and interactions.

A biological male with female gender identity in Belize may have to supress the expression of their gender identity given the hostile environment in which they live. The macho culture of the Caribbean results in men who don't act like men, face hatred and violence for their refusal to conform to normative gender identities. A deep-seated misogyny drives this hatred and enforces gender norms. Religious strictures and legal provisions both reinforce and justify this revulsion and rejection. The small overall population size in Belize further concentrates and confines along heteronormative lines due to the small overall number of non-conforming individuals and lack of safe spaces for them to be themselves. All of this is stacked against their ability to express a gender identity in line with their gender identity, but at odds with their biological sex. In this study, 89.4% of respondents identify as male, 4.5% as female and 6.1% as transgender. Taken together, respondents identifying as Transgender and with female gender identity, make up a total of 10.6% of all respondents. District differences were also noted in this regard, with the highest number of respondents identifying as female or trans coming from the remoter districts (Corozal, Stann Creek or Toledo) (24%), and Orange Walk (16.1%).

Table 80. Respondent Gender Identity by Country

		District				
		Belize	Cayo	Orange walk	Others	Total
What do you consider your gender to be: male, female, trans or other?	Male	490	287	125	108	1010
		92,6%	92,6%	83,9%	76,1%	89,4%
	Female	19	15	4	13	51
		3,6%	4,8%	2,7%	9,2%	4,5%
	Trans	20	8	20	21	69
		3,8%	2,6%	13,4%	14,8%	6,1%
Total		529	310	149	142	1130
		100,0%	100,0%	100,0%	100,0%	100,0%

Given the socio-cultural environment in Belize, and lack of empowerment and sexuality work undertaken with transwomen, it is not surprising that many struggle with their gender identity and expression. Therefore, this section considers respondents who identify as transgender, as

well as those who report having a female gender identity, as a single sub-group embracing a strong female gender identity; but differing in the degree to which they understand or relate to the term transgender, and extent to which they are willing or able to express their female gender identity in daily life.

By controlling for gender identity, and comparing study respondents reporting a female versus a male gender identity, this section of this report offers a unique opportunity to explore the vulnerabilities associated with incongruences between gender identity and biological sex in Belize. Only data that demonstrates significant divergence from the overall results already mentioned will be presented in this section.

Socio-Demographic Profile

Respondents specifically identifying as being transgender were more likely to report living alone (49.3%) than other respondents.

Table 81. Gender Identity and Living Alone

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Live alone	Yes	433	19	34	486
		42,9%	37,3%	49,3%	43,0%
	No	577	32	35	644
		57,1%	62,7%	50,7%	57,0%
Total		1010	51	69	1130
		100,0%	100,0%	100,0%	100,0%

Respondents identifying as trans or with the female gender were considerably more likely to have disclosed their sexual orientation to family and friends (75.4% and 84.3% respectively) when compared to respondents identifying as male (53.5%).

Table 82. Gender Identity and Voluntary Disclosure to Family and Friends

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you voluntarily told any member of your family or friends that you have sex with men or that you are trans?	Yes	539	43	52	634
		53,5%	84,3%	75,4%	56,2%
	No	469	8	17	494
		46,5%	15,7%	24,6%	43,8%
Total		1008	51	69	1128
		100,0%	100,0%	100,0%	100,0%

Sexual behaviour

Trans and female identifying respondents were considerably more likely to have had an early sexual debut than male identifying respondents.

Table 83. Gender Identity and Sexual Debut

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Age when first sexual episode	10 years old and less	66	6	5	77
		6,6%	11,8%	7,2%	6,8%
	11-15 years old	578	33	49	660
		57,5%	64,7%	71,0%	58,7%
	16 and more years old	361	12	15	388
		35,9%	23,5%	21,7%	34,5%
Total		1005	51	69	1125
		100,0%	100,0%	100,0%	100,0%

Those specifically identifying as transgender were over twice as likely to report that their first sexual encounter occurred against their will.

Table 84. Gender Identity and Voluntary Sexual Debut

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Voluntarily agreed first sexual episode	Yes	895	44	56	995
		91,5%	91,7%	81,2%	90,9%
	No	83	4	13	100
		8,5%	8,3%	18,8%	9,1%
Total		978	48	69	1095
		100,0%	100,0%	100,0%	100,0%

When specifically asked about the age when they had anal sex for the first time, respondents identifying as Transgender and female were much more likely to have had anal sex before the age of 16 when compared to male gender identifying respondents.

Table 6. Gender Identity and Age of First Anal Sex

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
How old when first anal sex	10 years old and less	26	5	4	35
		3,1%	9,8%	6,3%	3,7%
	11-15 years old	237	29	38	304
		28,1%	56,9%	59,4%	31,8%
	16 years old and more	579	17	22	618
		68,8%	33,3%	34,4%	64,6%
Total		842	51	64	957
		100,0%	100,0%	100,0%	100,0%

Transgender and female identifying respondents were considerably more likely to report only giving and not receiving oral sex with their sexual partners.

Table 85. Gender Identity and Oral Sex Practises

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
I only do oral sex with men/trans	Yes	95	15	19	129
		9,4%	29,4%	27,5%	11,4%
	Not selected	915	36	50	1001
		90,6%	70,6%	72,5%	88,6%
Total		1010	51	69	1130
		100,0%	100,0%	100,0%	100,0%

Transgender and female identifying respondents were also more likely to report engaging in anal sex than male identifying respondents.

Table 86. Gender Identity and Anal Sex Practises

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have anal sex with men/trans	Yes	866 88,4%	50 98,0%	67 97,1%	983 89,4%
	No	114 11,6%	1 2,0%	2 2,9%	117 10,6%
Total		980 100,0%	51 100,0%	69 100,0%	1100 100,0%

Compared to Male identifying respondents, Transgender and Female identifying respondents were much more likely to report only being bottomed in anal sex, and far less likely to penetrate a sexual partner.

Table 87. Gender Identity and Sexual Roles in Anal Sex

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Insertive or receptive anal sex with men in last 3 months	Just insertive anal sex with men	210 20,8%	3 5,9%	2 2,9%	215 19,0%
	Just receptive anal sex with men	130 12,9%	23 45,1%	37 53,6%	190 16,8%
	Insertive and receptive anal sex with men	382 37,8%	19 37,3%	23 33,3%	424 37,5%
	No anal sex in last 3 months	85 8,4%	5 9,8%	4 5,8%	94 8,3%
	No anal sex ever	144 14,3%	1 2,0%	2 2,9%	147 13,0%
	Refusal or undefined	59 5,8%	0 ,0%	1 1,4%	60 5,3%
Total		1010 100,0%	51 100,0%	69 100,0%	1130 100,0%

Transgender and female identifying respondents were more likely to report unprotected anal sex in the last 3 months than male identifying respondents.

Table 88. Gender Identity and Unprotected Anal Sex in Last 3 Months

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you ever had anal sex without a condom in the last 3 months?	Yes	347 40,2%	22 44,0%	37 55,2%	406 41,4%
	No	517 59,8%	28 56,0%	30 44,8%	575 58,6%
Total		864 100,0%	50 100,0%	67 100,0%	981 100,0%

Transgender and female identifying respondents were more likely to report never or almost never using a condom when they topped a male sexual partner compared to male identifying respondents.

Table 89. Gender Identity and Condom Use as Insertive Partner in Last 3 Months

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
In the last 3 months, how often were condoms used when you topped a man?	Never	76 12,8%	3 14,3%	5 20,8%	84 13,2%
	Almost never	11 1,9%	1 4,8%	0 ,0%	12 1,9%
	Sometimes	116 19,6%	6 28,6%	12 50,0%	134 21,0%
	Almost always/often	88 14,9%	1 4,8%	0 ,0%	89 14,0%
	Always	301 50,8%	10 47,6%	7 29,2%	318 49,9%
Total		592 100,0%	21 100,0%	24 100,0%	637 100,0%

Respondents identifying as female were more likely to report never, or almost never using a condom when being topped in the last three months (21.4%) compared with other respondents.

Table 90. Gender Identity and Unprotected Sex during Receptive Anal Sex in the Last 3 Months

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
In the last 3 months, how often did you use condoms when you were topped?	Never	71	5	7	83
		14,0%	11,9%	11,7%	13,6%
	Almost never	12	4	2	18
		2,4%	9,5%	3,3%	3,0%
	Sometimes	98	7	27	132
		19,3%	16,7%	45,0%	21,7%
	Almost always/often	79	7	5	91
		15,6%	16,7%	8,3%	14,9%
	Always	247	19	19	285
		48,7%	45,2%	31,7%	46,8%
Total		507	42	60	609
		100,0%	100,0%	100,0%	100,0%

Trans and Female identifying respondents were much less likely to report using a condom with their main male sex partner(s) last time they had anal sex.

Table 91. Gender Identity and Condom Use during Last Anal Sex with Main Partner(s)

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Was a condom used the last time you had anal sex with your main male sexual partner(s)?	Yes	298	15	14	327
		65,9%	48,4%	34,1%	62,4%
	No	154	16	27	197
		34,1%	51,6%	65,9%	37,6%
Total		452	31	41	524
		100,0%	100,0%	100,0%	100,0%

Table 92. Gender Identity and Condom

Transgender and female identifying respondents reported more than those identifying as males to ever having had unprotected anal sex with a male casual partner. This was particularly true for those specifically as identifying as Transgender.

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you ever had anal sex without a condom with a male casual partner?	Yes	328 38,2%	22 44,0%	41 61,2%	391 40,1%
	No	531 61,8%	28 56,0%	26 38,8%	585 59,9%
Total		859 100,0%	50 100,0%	67 100,0%	976 100,0%

Transgender and female identifying respondents also reported ever having had unprotected anal sex without with male partner they had paid to have sex with than male identifying respondents.

Table 93. Gender Identity and Unprotected Anal Sex with Partner that Sold Sex

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you ever had anal sex without a condom with a male or trans who you paid for sex?	Yes	90 10,6%	9 18,4%	16 24,2%	115 11,9%
	No	760 89,4%	40 81,6%	50 75,8%	850 88,1%
Total		850 100,0%	49 100,0%	66 100,0%	965 100,0%

Transgender and female identifying respondents reported in much higher percentages to ever have had exchanged sex for money, favours or goods.

Table 94. Gender Identity and Exchanging Sex for Money, Favours or Goods

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you ever exchanged or sold sex for money, favors, or goods?	Yes in last 12 months	170 16,9%	15 29,4%	30 43,5%	215 19,1%
	Yes, but not in last 12 months	102 10,1%	7 13,7%	11 15,9%	120 10,6%
	No	736 73,0%	29 56,9%	28 40,6%	793 70,3%
Total		1008 100,0%	51 100,0%	69 100,0%	1128 100,0%

Transgender and female identifying respondents were much less likely to ever have had sex with a woman than male identifying respondents.

Table 95. Gender Identity and Life-Prevalence of Sex with a Woman

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you ever had any type of sex with a woman?	Yes	583 57,7%	17 33,3%	15 21,7%	615 54,4%
	No	427 42,3%	34 66,7%	54 78,3%	515 45,6%
Total		1010 100,0%	51 100,0%	69 100,0%	1130 100,0%

Knowledge of HIV

Trans and female identifying respondents were less likely to identify anal sex as the sexual practise with greatest risk for HIV transmission and more likely to report that vaginal, anal and oral sex all carry equal risk for HIV transmission, when compared to male identifying respondents.

Table 96. Gender Identity and Knowledge about Type of Sex that Carries Greatest Risk for HIV Transmission.

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
What type of sex puts you most at risk for HIV infection?	Vaginal sex	35	5	5	45
		3,5%	9,8%	7,5%	4,1%
	Anal sex	466	19	21	506
		47,3%	37,3%	31,3%	45,8%
	Oral sex	18	0	4	22
		1,8%	,0%	6,0%	2,0%
	All carry equal risk	467	27	37	531
		47,4%	52,9%	55,2%	48,1%
Total		986	51	67	1104
		100,0%	100,0%	100,0%	100,0%

Alcohol Consumption

Transgender identifying respondents were almost three times as likely to report having alcohol on a daily basis when compared to the other respondents.

Table 97. Gender Identity and Frequency of Consumption of Alcoholic Beverages in last 6 Months

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
During the last 6 months, how often have you had drinks containing alcohol?	Every day	98	5	19	122
		9,8%	10,0%	27,5%	10,9%
	At least once a week	655	30	42	727
		65,2%	60,0%	60,9%	64,7%
	At least once a month	147	12	5	164
		14,6%	24,0%	7,2%	14,6%
	Less than once a month	79	3	0	82
		7,9%	6,0%	,0%	7,3%
	Never	26	0	3	29
		2,6%	,0%	4,3%	2,6%
Total		1005	50	69	1124
		100,0%	100,0%	100,0%	100,0%

Respondents specifically identifying as Transgender were far more likely to have engaged in binge drinking than other respondents, with more than have reporting to do so always (52.2%).

Table 98. Gender Identity and Binge Drinking

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
When you drink, how often do you have 5 or more drinks on one occasion?	Never	54	2	4	60
		5,4%	3,9%	5,8%	5,3%
	Almost never	82	9	2	93
		8,2%	17,6%	2,9%	8,3%
	Sometimes	354	18	16	388
		35,2%	35,3%	23,2%	34,5%
	Almost always/often	198	8	11	217
		19,7%	15,7%	15,9%	19,3%
	Always	317	14	36	367
		31,5%	27,5%	52,2%	32,6%
Total		1005	51	69	1125
		100,0%	100,0%	100,0%	100,0%

Stigma and Discrimination

Those who identified as transgender and female reported to a greater extent having known or felt that family members have made discriminatory remarks or gossiped about them because of their sexual orientation when compared to respondents identifying as males.

Table 99. Gender Identity and Discriminatory Remarks from Family

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you ever known or felt that family members have made discriminatory remarks or gossiped about you because you have sex with men?	Yes	399	34	40	473
		42,5%	68,0%	59,7%	44,8%
	No	539	16	27	582
		57,5%	32,0%	40,3%	55,2%
Total		938	50	67	1055
		100,0%	100,0%	100,0%	100,0%

Trans and female identifying respondents were considerably more likely to report having felt afraid or nervous accessing healthcare services, than respondents who identify as male.

Table 100. Gender Identity and Fear of Accessing Health Services

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you ever felt afraid, nervous or avoided going to healthcare services because you worry someone may discover you have sex with men?	Yes	315 31,9%	24 49,0%	34 49,3%	373 33,8%
	No	671 68,1%	25 51,0%	35 50,7%	731 66,2%
Total		986 100,0%	49 100,0%	69 100,0%	1104 100,0%

They were also more likely to report having heard healthcare providers gossiping about them or someone else because of their sexual orientation.

Table 101. Gender Identity and Experience with Healthcare Personnel Gossiping

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you ever heard healthcare providers gossiping about you or another patient because of having sex with men?	Yes	319 33,0%	22 45,8%	27 40,3%	368 34,0%
	No	649 67,0%	26 54,2%	40 59,7%	715 66,0%
Total		968 100,0%	48 100,0%	67 100,0%	1083 100,0%

Trans and female identifying respondents were much more likely to report having ever felt scared walking around public places because of their sexual orientation, by comparison to male identifying respondents.

Table 102. Gender Identity and Fear of Walking around in Public Places

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Have you ever felt scared to walk around in public places because of the treatment you might receive for having sex with men?	Yes	266	26	44	336
		26,5%	51,0%	63,8%	29,9%
	No	738	25	25	788
		73,5%	49,0%	36,2%	70,1%
Total		1004	51	69	1124
		100,0%	100,0%	100,0%	100,0%

They were also more likely to have experienced verbal harassment than male identifying respondents on account of sexual orientation.

Table 103. Gender Identity and Verbal Harassment

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Has someone ever verbally harassed or insulted you and you felt it was because you have sex with men?	Yes	463	42	51	556
		46,0%	82,4%	75,0%	49,4%
	No	543	9	17	569
		54,0%	17,6%	25,0%	50,6%
Total		1006	51	68	1125
		100,0%	100,0%	100,0%	100,0%

Sexual Abuse

Female and trans reported more than male to have been forced to have sex when not wanted.

Table 104. Gender Identity and Forced to Have Sex

		What do you consider your gender to be: male, female, trans or other?			
		Male	Female	Trans	Total
Has someone ever forced you to have sex when you did not want to?	Yes	171	16	24	211
		17,1%	31,4%	34,8%	18,8%
	No	831	35	45	911
		82,9%	68,6%	65,2%	81,2%
Total		1002	51	69	1122
		100,0%	100,0%	100,0%	100,0%

Key Findings Box for Gay Identifying MSM versus MSM Identifying as Straight/Heterosexual or Bisexual

This section explores differences observed when controlling for sexual orientation in the data analysis. It seeks to highlight significant differences observed between men who identify as heterosexual, bisexual and gay/homosexual. In particular, this section looks at better understanding the sub-group of men that do not gay identify, but rather see themselves as bisexual or heterosexual. Traditionally these groups have been more difficult to recruit in studies and less is known about them than their gay-identifying counterparts.

Socio-demographic Profile

Respondents who identified as heterosexual reported more than other respondents to currently practice a religion (54.5%).

Table 105. Sexual Orientation and Religion

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Currently practice a religion	Yes	254 42,1%	133 39,9%	60 54,5%	447 42,7%
	No	350 57,9%	200 60,1%	50 45,5%	600 57,3%
Total		604 100,0%	333 100,0%	110 100,0%	1047 100,0%

Heterosexual and bisexual identifying respondents reported lower educational levels overall (73.9% and 69.1% respectively) than Gay identifying respondents (84.6%).

Table 106. Sexual Orientation and Educational Level

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Level of education competed	Lowest	93	103	29	225
		15,4%	30,9%	26,1%	21,4%
	Highest	512	230	82	824
		84,6%	69,1%	73,9%	78,6%
Total		605	333	111	1049
		100,0%	100,0%	100,0%	100,0%

Heterosexual identifying respondents were more likely to report living on their own than other who considered themselves as heterosexual reported more than others to live alone. This suggests their heterosexual identity may have little to do with the nuclear family it is generally associated with in the Caribbean.

Table 107. Sexual Orientation and Living Alone

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Live alone	Yes	272	107	65	444
		45,0%	32,1%	58,6%	42,3%
	No	333	226	46	605
		55,0%	67,9%	41,4%	57,7%
Total		605	333	111	1049
		100,0%	100,0%	100,0%	100,0%

Less surprisingly, heterosexual identifying respondents were much more likely to acknowledge being on the “down low” than other respondents. Whereas, those who identified as gay, were more likely than other respondents to report that they were “out and proud”.

Table 108. Sexual Orientation and MSM Sub-group Identification

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Which sub-group of MSM do you most identify with?	MSM who is out and proud about his/her sexual orientation	269 44,5%	22 6,6%	3 2,7%	294 28,1%
	MSM who is somewhat open about his/her sexual orientation	277 45,8%	133 40,1%	8 7,3%	418 39,9%
	MSM who is very much on the Down Low	59 9,8%	177 53,3%	99 90,0%	335 32,0%
Total		605 100,0%	332 100,0%	110 100,0%	1047 100,0%

Respondents identifying as heterosexual were more likely not to have disclosed to family and friends compared to other respondents.

Table 109. Sexual Orientation and Voluntary Disclosure to Family and Friends

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have you voluntarily told any member of your family or friends that you have sex with men or that you are trans?	Yes	397 65,6%	165 49,5%	10 9,2%	572 54,6%
	No	208 34,4%	168 50,5%	99 90,8%	475 45,4%
Total		605 100,0%	333 100,0%	109 100,0%	1047 100,0%

Heterosexual identifying respondents reported more than other respondents to have initiated sexual activity at a younger age (between the years of 11-15 years old); whereas those who identified as bisexual were more likely than others to have had their sexual debut at 16 and older.

Table 110. Sexual Orientation and Sexual Debut

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Age sexual debut	10 years old and less	40	19	6	65
		6,6%	5,7%	5,5%	6,2%
	11-15 years old	342	180	86	608
		56,7%	54,1%	78,9%	58,2%
	16 and more years old	221	134	17	372
		36,7%	40,2%	15,6%	35,6%
Total		603	333	109	1045
		100,0%	100,0%	100,0%	100,0%

However, when it came to age of first anal sex act, heterosexual identifying respondents reported initiating at 16 or older in higher proportions to other respondents.

Table 111. Sexual Orientation and Age of First Anal Sex Act

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
How old when first anal sex	10 years old and less	16	7	2	25
		3,1%	2,3%	3,5%	2,8%
	11-15 years old	176	79	5	260
		33,6%	26,4%	8,8%	29,5%
	16 years old and more	332	213	50	595
		63,4%	71,2%	87,7%	67,6%
Total		524	299	57	880
		100,0%	100,0%	100,0%	100,0%

Heterosexual identifying respondents were more likely than gays/homosexuals and bisexuals to report that they engaged in recipient, non-reciprocal in oral sex.

Table 112. Sexual Orientation and Non-reciprocal Oral Sex

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
I only allow men/trans to do oral sex on me	Yes	45	79	57	181
		7,4%	23,7%	51,4%	17,3%
	Not selected	560	254	54	868
		92,6%	76,3%	48,6%	82,7%
Total		605	333	111	1049
		100,0%	100,0%	100,0%	100,0%

By contrast, gay/homosexual identifying respondents were more prone to report being reciprocal in oral sex with MSM/Trans partners.

Table 113. Sexual Orientation and Reciprocal Oral Sex

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
I both give and receive oral sex from men/trans	Yes	395	153	24	572
		65,3%	45,9%	21,6%	54,5%
	Not selected	210	180	87	477
		34,7%	54,1%	78,4%	45,5%
Total		605	333	111	1049
		100,0%	100,0%	100,0%	100,0%

Heterosexual identifying respondents were much less likely to report having anal sex with other men or trans than Gay/Homosexual and bisexual identifying respondents.

Table 114. Sexual Orientation and Anal Sex

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have anal sex with men/trans	Yes	565	295	46	906
		95,9%	88,9%	46,9%	88,9%
	No	24	37	52	113
		4,1%	11,1%	53,1%	11,1%
Total		589	332	98	1019
		100,0%	100,0%	100,0%	100,0%

Heterosexual identifying respondents were less likely to never or almost never use a condom when topping another man (active partner in anal sex) during anal sex in the last 3 months (8.7%), compared to 18.1% for gay/homosexual and 10.0% for bisexual identifying respondents.

Table 115. Sexual Orientation and Condom Use in Receptive Anal Sex with Male Partner in Last 3 Months

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
In the last 3 months, how often were condoms used when you topped a man?	Never	51 14,9%	23 9,6%	2 8,7%	76 12,6%
	Almost never	11 3,2%	1 ,4%	0 ,0%	12 2,0%
	Sometimes	57 16,7%	63 26,4%	5 21,7%	125 20,7%
	Almost always/often	67 19,6%	17 7,1%	2 8,7%	86 14,2%
	Always	156 45,6%	135 56,5%	14 60,9%	305 50,5%
Total		342 100,0%	239 100,0%	23 100,0%	604 100,0%

However, a reversal is evident when it comes to unprotected sex as the receptive partner. In this scenario 23.5% of heterosexual identifying respondents reported never or almost never using a condom during receptive anal sex in the last 3 months, compared to 18.4% for gay/homosexual and 9.7% for bisexual identifying respondents.

Table 116. Sexual Orientation and Condom Use in Passive Anal Sex with Male Partner in Last 3 Months

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
In the last 3 months, how often did you use condoms when you were topped?	Never	58	13	3	74
		15,0%	9,7%	17,6%	13,8%
	Almost never	13	0	1	14
		3,4%	,0%	5,9%	2,6%
	Sometimes	71	34	6	111
		18,3%	25,4%	35,3%	20,6%
	Almost always/often	71	11	1	83
		18,3%	8,2%	5,9%	15,4%
	Always	174	76	6	256
		45,0%	56,7%	35,3%	47,6%
Total		387	134	17	538
		100,0%	100,0%	100,0%	100,0%

Bisexual identifying respondents reported the highest condom use with a main partner(s) during the last anal sex encounter compared to other respondents.

Table 117. Sexual Orientation and Condom Use in Last Anal Sex Encounter with Main Male Sexual Partner

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Was a condom used the last time you had anal sex with your main male sexual partner(s)?	Yes	180	127	8	315
		60,0%	75,1%	72,7%	65,6%
	No	120	42	3	165
		40,0%	24,9%	27,3%	34,4%
Total		300	169	11	480
		100,0%	100,0%	100,0%	100,0%

When comparing anal sexual roles according to reported sexual orientation, the following observations can be made:

- Bisexual identifying respondents reported the highest rates of being exclusively active in anal sex (37.2%)
- Gay/homosexual identifying respondents the highest rates of being exclusively passive in anal sex (20.7%)
- Gay/homosexual identifying respondents the highest rates of being versatile in anal sex (43.8%)

- Heterosexual identifying males reported the highest rates of never engaging in anal sex of any kind (58.6%).

Table 118. Sexual Orientation and Sexual Role in Anal Sex with Men in Last 3 Months

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Insertive or receptive anal sex with men in last 3 months	Just insertive anal sex with men	77 12,7%	124 37,2%	10 9,0%	211 20,1%
	Just receptive anal sex with men	125 20,7%	21 6,3%	4 3,6%	150 14,3%
	Insertive and receptive anal sex with men	265 43,8%	115 34,5%	13 11,7%	393 37,5%
	No anal sex in last 3 months	56 9,3%	28 8,4%	9 8,1%	93 8,9%
	No anal sex ever	40 6,6%	38 11,4%	65 58,6%	143 13,6%
	Refusal or undefined	42 6,9%	7 2,1%	10 9,0%	59 5,6%
Total		605 100,0%	333 100,0%	111 100,0%	1049 100,0%

A higher percentage of bisexual and heterosexual identifying respondents reported engagement in sex work in the last 12 months compared to those with those with gay/homosexual identities.

Table 119. Sexual Orientation and Sex Work

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have you ever exchanged or sold sex for money, favors, or goods?	Yes in last 12 months	80 13,3%	79 23,7%	25 22,5%	184 17,6%
	Yes, but not in last 12 months	73 12,1%	21 6,3%	9 8,1%	103 9,8%
	No	450 74,6%	233 70,0%	77 69,4%	760 72,6%
Total		603 100,0%	333 100,0%	111 100,0%	1047 100,0%

Heterosexual and bisexual identifying respondents were almost 3 times more likely to have reported ever having sex with a woman compared to gay/homosexual identifying respondents.

Table 120. Sexual Orientation and Sex with Women

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have you ever had any type of sex with a woman?	Yes	196 32,4%	300 90,1%	101 91,0%	597 56,9%
	No	409 67,6%	33 9,9%	10 9,0%	452 43,1%
Total		605 100,0%	333 100,0%	111 100,0%	1049 100,0%

They were also more likely to report having vaginal or anal sex with a woman in the last 12 months but to a lesser degree.

Table 121. Sexual Orientation and Sex with a Women in the Last 12 Months

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
In the last 12 months, have you had vaginal or anal sex with a woman?	Yes	26 13,3%	225 75,0%	66 65,3%	317 53,1%
	No	170 86,7%	75 25,0%	35 34,7%	280 46,9%
Total		196 100,0%	300 100,0%	101 100,0%	597 100,0%

Heterosexual identifying respondents were much less likely to report never or almost never using a condom during vaginal sex with a woman in the last 12 months (63.1%) compared to gay/homosexual and bisexual identifying respondents (28.0% and 23.2% respectively).

Table 122. Sexual Orientation and Condom Use in Vaginal Sex with a Woman in Last 12 Months

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Of the times you had vaginal sex with a woman in the last 12 months, how often was a condom used?	Never	7 28,0%	39 18,1%	28 43,1%	74 24,3%
	Almost never	0 ,0%	11 5,1%	13 20,0%	24 7,9%
	Sometimes	7 28,0%	46 21,4%	18 27,7%	71 23,3%
	Almost always/often	0 ,0%	25 11,6%	4 6,2%	29 9,5%
	Always	11 44,0%	94 43,7%	2 3,1%	107 35,1%
Total		25 100,0%	215 100,0%	65 100,0%	305 100,0%

Unprotected vaginal and/or anal sex with women in last sexual encounter with a female considered a main partner was marked across the board for all sexual orientation identities, but almost double with heterosexual identifying respondents (85.7%) compared to the others.

Table 123. Sexual Orientation and Condom Use in Last Sexual Encounter with Main Female Partner

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Was a condom used the last time that you had vaginal or anal sex with a woman who you consider to be a main partner	Yes	13 56,5%	117 57,1%	9 14,3%	139 47,8%
	No	10 43,5%	88 42,9%	54 85,7%	152 52,2%
Total		23 100,0%	205 100,0%	63 100,0%	291 100,0%

Table 124. Sexual Orientation and Multiple Concurrent Sexual Partners in Last 12 Months

Heterosexual identifying respondents had the highest rates of multiple concurrent sexual partners in the last 12 months, compared to the other sexual orientation identity respondents.

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
No multiple sexual partners at the same time in last 12 months	Selected	245 40,5%	129 38,7%	32 28,8%	406 38,7%
	No selected	360 59,5%	204 61,3%	79 71,2%	643 61,3%
Total		605 100,0%	333 100,0%	111 100,0%	1049 100,0%

The Bisexual and heterosexual identifying respondents reported much higher rates of multiple female partners than those with a gay/homosexual sexual orientation identity.

Table 125. Sexual Orientation and Multiple Concurrent Female Partners

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Multiple partners: 2-3 female partners	Selected	8 1,3%	92 27,6%	20 18,0%	120 11,4%
	No selected	597 98,7%	241 72,4%	91 82,0%	929 88,6%
Total		605 100,0%	333 100,0%	111 100,0%	1049 100,0%

Gay/homosexual identifying respondents reported the highest rates of multiple concurrent male partners (4 or more), followed by heterosexual identifying respondents.

Table 126. Sexual Orientation and 4 or More Multiple Concurrent Male Partners

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Multiple partners: 4 or more male partners	Selected	107 17,7%	29 8,7%	12 10,8%	148 14,1%
	No selected	498 82,3%	304 91,3%	99 89,2%	901 85,9%
Total		605 100,0%	333 100,0%	111 100,0%	1049 100,0%

When it came to multiple concurrent female partners (4 or more), bisexual identifying respondents reported the highest overall rates.

Table 127. Sexual Orientation and 4 or More Multiple Concurrent Female Partners

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Multiple partners: 4 or more female partners	Selected	3	24	5	32
		,5%	7,2%	4,5%	3,1%
	No selected	602	309	106	1017
		99,5%	92,8%	95,5%	96,9%
Total		605	333	111	1049
		100,0%	100,0%	100,0%	100,0%

Heterosexual identifying respondents were more likely to report it being very to somewhat difficult for them to obtain condoms (20.4%).

Table 128. Sexual Orientation and Access to Condoms

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
How easy is it for you to get condoms when you need them?	Very difficult	5	9	7	21
		,8%	2,7%	6,5%	2,0%
	Somewhat difficult	9	21	15	45
		1,5%	6,3%	13,9%	4,4%
	Neither difficult nor easy	12	12	3	27
		2,0%	3,6%	2,8%	2,6%
	Somewhat easy	130	49	38	217
		22,0%	14,7%	35,2%	21,0%
	Very easy	435	242	45	722
		73,6%	72,7%	41,7%	70,0%
Total		591	333	108	1032
		100,0%	100,0%	100,0%	100,0%

Heterosexual identifying respondents were much less likely to have reported using lubricants during sex than the other respondents.

Table 129. Sexual Orientation and Lubricant Use

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have you ever used lubricants during sex?	Yes, but only without condoms	54 9,0%	31 9,3%	4 3,6%	89 8,5%
	Yes, but only with condoms	147 24,4%	90 27,0%	20 18,2%	257 24,6%
	Yes, both with and without condoms	207 34,3%	106 31,8%	9 8,2%	322 30,8%
	No	195 32,3%	106 31,8%	77 70,0%	378 36,1%
Total		603 100,0%	333 100,0%	110 100,0%	1046 100,0%

Knowledge of HIV

Bisexual identifying respondents were less likely to correctly identify anal sex as having the greatest risk for HIV transmission with only 34% selecting this option. Bisexual identifying respondents were most likely to report that all types of sexual practises carry equal risk.

Table 130. Sexual Orientation and HIV Risk Associated with Different Sexual Practises.

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
What type of sex puts you most at risk for HIV infection?	Vaginal sex	8 1,4%	29 8,7%	4 3,8%	41 4,0%
	Anal sex	309 52,7%	113 34,0%	53 50,0%	475 46,4%
	Oral sex	9 1,5%	9 2,7%	0 ,0%	18 1,8%
	All carry equal risk	260 44,4%	181 54,5%	49 46,2%	490 47,9%
Total		586 100,0%	332 100,0%	106 100,0%	1024 100,0%

STI and HIV Testing

Less than 15% of heterosexual identifying respondents reported having had an STI test in the last 12 (14.4%), compared with 50.0% for bisexual and 36.5% for gay/homosexual identifying respondents

Table 131. Sexual Orientation and HIV Testing in Last 12 Months

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
In the last 12 months, have you been tested for a sexually transmitted infection?	Yes	220 36,5%	166 50,0%	16 14,4%	402 38,4%
	No	383 63,5%	166 50,0%	95 85,6%	644 61,6%
Total		603 100,0%	332 100,0%	111 100,0%	1046 100,0%

Bisexual identifying respondents reported more than heterosexual identifying respondents to ever have had an HIV test (77.2% versus 57.8%).

Table 132. Sexual Orientation and HIV Testing

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have you ever been tested for HIV infection?	Yes	426 70,9%	257 77,2%	59 57,8%	742 71,6%
	No	175 29,1%	76 22,8%	43 42,2%	294 28,4%
Total		601 100,0%	333 100,0%	102 100,0%	1036 100,0%

Alcohol Use

Heterosexual identifying respondents reported higher rates of weekly consumption of alcohol compared to other respondents.

Table 133. Sexual Orientation and Alcohol Use

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
During the last 6 months, how often have you had drinks containing alcohol?	Everyday	55 9,1%	33 10,0%	11 10,0%	99 9,5%
	At least once a week	406 67,3%	194 58,8%	83 75,5%	683 65,5%
	At least once a month	87 14,4%	58 17,6%	11 10,0%	156 15,0%
	Less than once a month	36 6,0%	36 10,9%	5 4,5%	77 7,4%
	Never	19 3,2%	9 2,7%	0 ,0%	28 2,7%
Total		603 100,0%	330 100,0%	110 100,0%	1043 100,0%

They also reported the highest levels of always or almost always engaging in binge drinking, with 67.3% of Heterosexual identifying respondents reporting this practise, compared to 38.1% and 55.4% for gay/homosexual and bisexual identifying respondents respectively.

Table 134. Sexual Orientation and Binge Drinking

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
When you drink, how often do you have 5 or more drinks on one occasion?	Never	30 5,0%	25 7,6%	0 ,0%	55 5,3%
	Almost never	47 7,8%	35 10,6%	4 3,6%	86 8,2%
	Sometimes	192 31,8%	145 43,8%	32 29,1%	369 35,3%
	Almost always/often	120 19,9%	47 14,2%	32 29,1%	199 19,1%
	Always	214 35,5%	79 23,9%	42 38,2%	335 32,1%
Total		603 100,0%	331 100,0%	110 100,0%	1044 100,0%

Heterosexual identifying respondents were much less likely to have experienced discriminatory remarks from family members than gay/homosexual and bisexual identifying respondents.

Table 135. Sexual Orientation and Discriminatory Remarks from Family Members

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have you ever known or felt that family members have made discriminatory remarks or gossiped about you because you have sex with men?	Yes	305 51,7%	113 37,7%	7 8,1%	425 43,5%
	No	285 48,3%	187 62,3%	79 91,9%	551 56,5%
Total		590 100,0%	300 100,0%	86 100,0%	976 100,0%

Bisexual and Heterosexual identifying respondents were less likely gay/homosexual identifying respondents to report ever having heard health care providers gossiping about them or others.

Table 136. Sexual Orientation and Witnessing Health Care Provider Gossip

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have you ever heard health care providers gossiping about you or another patient because of having sex with men?	Yes	232 39,2%	76 24,2%	29 29,3%	337 33,5%
	No	360 60,8%	238 75,8%	70 70,7%	668 66,5%
Total		592 100,0%	314 100,0%	99 100,0%	1005 100,0%

Bisexual and Heterosexual identifying respondents were less likely than gay/homosexual identifying respondents to report ever having felt scared to walk around in public places because of the treatment they might receive on account of their sexual orientation.

Table 137. Sexual Orientation and Fear Walking in Public Places because of Sexual Orientation.

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have you ever felt scared to walk around in public places because of the treatment you might receive for having sex with men?	Yes	215	62	6	283
		35,8%	18,7%	5,4%	27,1%
	No	386	269	105	760
		64,2%	81,3%	94,6%	72,9%
Total		601	331	111	1043
		100,0%	100,0%	100,0%	100,0%

Bisexual and Heterosexual identifying respondents were less likely than gay/homosexual identifying respondents to report that someone had ever verbally harassed or insulted them.

Table 138. Sexual Orientation and Verbal Harassment and Insults

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Has someone ever verbally harassed or insulted you and you felt it was because you have sex with men?	Yes	376	106	8	490
		62,4%	31,9%	7,2%	46,8%
	No	227	226	103	556
		37,6%	68,1%	92,8%	53,2%
Total		603	332	111	1046
		100,0%	100,0%	100,0%	100,0%

Sexual Abuse

Heterosexual and bisexual identifying respondents were less likely to report having been physically, emotionally or mentally abused by a partner in a relationship than gay/homosexual identifying respondents.

Table 139. Sexual Orientation and Partner Physical, Emotional or Mental Abuse

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
Have you ever been physically, emotionally, or mentally abused by a partner in a relationship?	Yes	188 31,3%	81 24,3%	26 23,4%	295 28,2%
	No	413 68,7%	252 75,7%	85 76,6%	750 71,8%
Total		601 100,0%	333 100,0%	111 100,0%	1045 100,0%

Bisexual identifying respondents reported more than gay/homosexual and heterosexual identifying respondents to have excellent or very good mental health. Heterosexual reported more good.

Table 140. Sexual Orientation and Auto-perception of Mental Health

		What do you consider your sexual orientation?			
		Gay or homosexual	Bisexual	Heterosexual	Total
In general, would you say your mental health is..	Excellent or very good	254 42,0%	183 55,0%	40 36,0%	477 45,5%
	Good	296 48,9%	122 36,6%	63 56,8%	481 45,9%
	Fair	49 8,1%	18 5,4%	7 6,3%	74 7,1%
	Poor	6 1,0%	10 3,0%	1 ,9%	17 1,6%
Total		605 100,0%	333 100,0%	111 100,0%	1049 100,0%

POPULATION SIZE ESTIMATES RESULTS

Background

Estimating the population sizes of MSM and Trans Women in Belize is challenging given that the behaviours practiced by these groups are subject to high levels of stigma and discrimination, resulting in these groups not wanting to be identified or counted.

Furthermore, the overall small numbers of key population groups and the lack of available studies on key populations or of service data, further limit the basis on which to apply traditional size estimation techniques.

PSE techniques that proved of little use in the Belizean context

During the formative phase of the PSE study, we assessed a variety of size estimation methods to determine which were the most feasible for use in Belize. Given the much hidden nature of these populations, and the lack of sites where the different groups congregate, we quickly realized that the use of methodologies involving direct counts were not feasible or were unreliable, because the counts can only occur at locations where populations are visible. Few such spaces exist in Belize, and where they do, they consist largely of mixed environments, that make objective identification by observation highly problematic. Thus, we had to discard some of the traditional techniques used, like enumeration, capture/recapture, and the nomination methods. Using techniques based on service data, such as the Service Multiplier Method, also proved challenging on account of the fact that the data:

1. Was not available or collected;
2. Was not available in a form specific to the population being estimated;
3. Did not meet the necessary eligibility criteria for use in estimate calculations.

Thus, plans to generate estimates by pooling country data by recall periods and combining country data using meta-analytic procedures had to be abandoned.

Confronted with these challenges, and given the need to indirectly estimate MSM and trans women population sizes at the country level, we selected the following methods for determining size estimates in Belize.

- Literature Review Based Estimates
- The Unique Object Multiplier Method (UOM) (just used with MSM)
- The "Wisdom of the Crowds" Estimates (WOTC)
- Mobile/Web Apps Multiplier Method (just used with MSM)
- Eligible Participant Multiplier Method (just used with trans women)

The range of population sizes provided is based on the triangulation of the results using these different population size estimate methods.

Population Size Estimates Based on Literature Review

Our systematic literature search involved an extensive review of the published and grey literature searching for relevant data on population size estimates, initially pertaining to Belize, and later expanded to include the countries of the Caribbean basin. This literature-based method drew on both published population sizes for the general population, typically stratified by age and gender, and estimates of the population of MSM and transgender women. The idea is that by finding studies that can be used to provide prevalence rates for MSM and trans women between ages of 15 and 64 years of age[xxxi], we can calculate benchmark population size estimates for the OECS with upper and lower plausible bounds. By leveraging existing estimates from a similar context/geographic region and applying them to a country like Belize, where such research has not yet been conducted, we were able to generate estimate ranges for Belize.

The expanded literature review included the broader catchment area of the Caribbean basin, and yielded an additional 27 or so studies, depending on the cut-off date selected for data inclusion. The reviewed data varies widely in terms of methods used, geographic coverage, time frames, and definitions used and assumptions made about MSM and trans women. In addition, much of the raw data is not available for scrutiny. All of this makes comparisons challenging and calculations involving key population prevalence highly problematic. A recent assessment conducted by Sabin et al[xxxii] on the Availability and Quality of Size Estimations of Female Sex Workers, Men Who Have Sex with Men, People Who Inject Drugs and Transgender Women (TG) in Low-and Middle-Income Countries highlights some of the inherent challenges. The table below, adapted from the aforementioned article, summarizes the limitations for existing population estimates in the Caribbean Basin. It should be emphasized that many of the challenges described result in the likelihood of the under-estimation of the key populations due to estimates being calculated with easier to reach sub-groups such as gay-identifying MSM; or because the calculations involved a limited geographic catchment area.

Table 141. Categorization of Availability and Quality of PSE by Key Population Groups.[xxxiii]

Countries	Availability and quality categorization	Groups covered
Belize	Nationally inadequate but locally adequate in selected sites	MSM
Costa Rica	Nationally inadequate but locally adequate in selected sites	MSM TG
Cuba	Documented estimates but inadequate methods	MSM TG
Dominica	Undocumented or untimely	MSM
Dominican Republic	Nationally adequate	MSM TG

Ecuador	Nationally inadequate but locally adequate in selected sites	MSM TG
El Salvador	Nationally inadequate but locally adequate in selected sites	MSM TG
Guatemala	Nationally inadequate but locally adequate in selected sites	MSM
Guyana	Nationally adequate	MSM TG
Haiti	Undocumented or untimely	MSM
Honduras	Nationally inadequate but locally adequate in selected sites	MSM
Jamaica	Nationally inadequate but locally adequate in selected sites	MSM
Panama	Nationally inadequate but locally adequate in selected sites	MSM TG
Suriname	Nationally inadequate but locally adequate in selected sites	MSM

MSM Size Estimates derived from Literature Review

The prevalence range for MSM in the Caribbean that were the most reliable went from a low of 6.25% (Cuba)[xxxiv] to a high of 11.01% (Bahamas). The range for MSM is not affected by adding the additional 5 countries with data from the broader Caribbean basin, because of the challenges in generating reliable country-wide estimates in many of the cited studies. However, the additional countries from the expanded Caribbean basin do strengthen the validity of the range of the prevalence rate, due to the observed consistency of the data throughout this larger sample of countries. The estimate from Cuba is a particularly interesting source to rely upon because the estimate was based on data collected in a census applied in the general population. To our knowledge, this is the only census data collected in Caribbean basin that asks about sexual orientation. For this reason, we used the Cuban MSM prevalence for our lower range.

Table 142. MSM Prevalence in the Caribbean Basin Based on Literature Review

Country	Estimate of Men who have Sex with Men	Year	Males between 15 and 64 years old	Prevalence	Estimate Source Method Used
Bahamas	3,035	2013	27,415	11.01%	UNAIDS GARPR

Barbados	2,618	2014	100,563	Not calculated as estimate locally adequate in selected sites	UNAIDS GARPR ***Methods used:*** Multiplier
Cuba	254,544	2014	4,070,357	6.25%	UNAIDS GARPR ***Methods used:*** Household survey
Dominica	454	2013	25,009	Not calculated as estimate locally adequate in selected sites	UNAIDS GARPR
Dominican Republic	124,472	2014	3,546,266	Not Reliable as a national estimate 3.51%	UNAIDS GARPR ***Methods used:*** Surveys and extrapolations
El Salvador	42,808	2014	1,831,410	Not Reliable as a national estimate 2.34%	UNAIDS GARPR ***Methods used:*** Spectrum
Guatemala	109,152	2012	4,841,016	Not calculated as estimate locally adequate in selected sites	UNAIDS GARPR
Guyana	2,464	2014	244,748	Not calculated as estimate locally adequate in selected sites	UNAIDS GARPR ***Geographic coverage:*** 10 sites; ***Methods used:*** PLACE methodology
Haiti	68,390	2013	3,305,599	Not calculated as estimate locally adequate in selected sites	UNAIDS GARPR
Honduras	55,934	2014	2,501,127	Not calculated as estimate locally adequate in selected sites	UNAIDS GARPR ***Methods used:*** Expert's opinion and literature review
Jamaica	38,138	2012	867,623	Not used because of extremely hostile environment that deters MSM from disclosing their sexual orientation listed as important limitation in the study. 4.39%	UNAIDS GARPR ***Methods used:*** 4% of adult (15+) male population
Nicaragua	57,123	2012	1,926,825	Not Reliable as a national estimate 2.96%	UNAIDS GARPR # ***Methods used:*** Expert's opinion

Panama	43,336	2012	1,329,142	Not Reliable as a national estimate 3.26%	UNAIDS GARPR
Suriname	1,317	2010	186,149	Not calculated as estimate is for Paramaribo only.	UNAIDS GARPR ***Geographic coverage:*** Paramaribo; ***Methods used:*** Consensus, multiplier, wisdom of the crowds, scientific literature review and modified Delphi

The highest reported rate of 11.01% (Bahamas) was selected as the upper estimate, but given that this rate was much higher than found elsewhere, we did not rely on it for the purpose of our calculations. It should be noted that typically there is under-reporting (non-response or misreporting) observed in self-reported sexual orientation from broad population-based government-initiated questionnaires.[xxxv]

Size estimates for MSM in Belize using these parameters are presented in the table below, with lower and upper estimates based on the ranges established from the literature review.

Table 143. MSM Estimates per Country Based on Literature Review

Method	Estimate	Range
Literature	9,891	7,159-12,611

Trans Women Size Estimates Derived from Literature Review

The literature available on population size estimates of trans women in the Caribbean is very limited, and the existing studies have significant limitations in terms of methods, definitions and assumptions. Attempts to estimate trans women in the Caribbean have been made in the Dominican Republic and Guyana, as well as various countries conforming the Caribbean basin. The table below summarizes key information regarding these studies and flags data used in our calculations. The most rigorous size estimates of transgender populations have been carried out by the Williams Institute of University of California Los Angeles (UCLA). What these studies lack in geographic proximity is compensated for in terms of methodology and accessible data. Therefore, we have also included the results of the two reference studies conducted by the Williams Institute as the upper bounds of our calculations.

Table 144. Data from the Literature Review on Size Estimates in Trans Women, Caribbean Basin

Country	Study	Estimate

Dominican Republic	Estimaciones del tamaño de la población clave de la República Dominicana 2016 Available at: file:///C:/Users/CVC.PROACTIVIDA/Downloads/tr-16-146-sp%20(1).pdf	Absolute Estimate: 5.169 trans women (based on Place Study) 0.20% of Men between the ages of 15 and 49 years of age Based on Place Study
Guyana	Validating Estimates of the Size of Key Populations: A Study in Region 4 of Guyana 2017 https://www.measureevaluation.org/resources/publications/tr-17-184_en Based on Place study. Covers only Demerara-Mahaica (Region 4) only 157,448 male population (15 to 49) of Region 4[xxxvi] Place Study N=701 5.8% identified as Trans Women	***Not reliable as national estimate*** Absolute Estimate: 292 (Service multiplier produced highest estimate 0.185% of Men between the ages of 15 and 49 years of age
Guatemala	Informe final Caracterización y estimación del tamaño poblacional en mujeres trans en Guatemala, 2015 Available at: http://www.aidsinfoonline.org/kpatlas/document/GTM/GTM_2015_PSE_TG.pdf	0.12% of Men between the ages of 15 and 49 years of age
El Salvador	Estimación del Tamaño de las Poblaciones Clave en El Salvador en Mujeres trabajadoras sexuales, mujeres trans y hombres que tienen sexo con otros hombres. El Salvador (2014) Available at: https://www.paho.org/hq/dmdocuments/2016/2016-cha-estimation-pop-size-transgender-vih.pdf	0.1% of Men between the ages of 15 and 49 years of age

Panama	Estimación del Tamaño de las Poblaciones Clave en Panamá Mujeres trabajadoras sexuales, mujeres trans y hombres que tienen sexo con otros hombres Available at: http://www.aidsinfoonline.org/kpatlas/document/PAN/PAN_2013_2014_PSE_FSW_MSM_TG.pdf	***Not reliable as national estimate*** <u>Absolute Estimate :</u> 888 Based on data collected in 2013
Nicaragua	Estimación del tamaño de la Población de hombres que tienen sexo con hombres, trabajadoras sexuales y transgénero femeninas de tres ciudades de Nicaragua (2012) Available at: http://www.mcr-comisca.org/sites/all/modules/ckeditor/ckfinder/userfiles/files/R%20CAR%20NI%202012%20Estimacion%20Poblaciones%202012%20Nicaragua%20Reporte%20Final.pdf	Nicaragua study attempted to do estimates for trans separately but was not able to do so and had to present the MSM and trans data jointly.
Williams Institute (UCLA)	How many people are lesbian, gay, bisexual, and transgender? Gary J. Gates, Williams Institute (UCLA) 2011 Available at:https://williamsinstitute.law.ucla.edu/wp-content/uploads/Gates-How-Many-People-LGBT-Apr-2011.pdf Gary J. Gates et Al. How Many Adults Identify as Transgender in the Unites States. Williams Institute (UCLA) Available at: https://williamsinstitute.law.ucla.edu/wp-content/uploads/How-Many-Adults-Identify-as-Transgender-in-the-United-States.pdf	0.3%(Gates, 2011) 0.6% (Gates 2016) The source usually considered most reliable study to estimate the size of Transgender Women is the Williams Institute (UCLA) report on the USA trans population. This year's (2016) report (Gates, 2016) finds the revised number to be 0.6%, double the 2011 number. The previous 2011 report (Gates, 2011) found 0.3%

Country-based size estimates for transgender women in Belize proved extremely challenging, both because of the overall small numbers of trans women by country, and the socio-cultural challenges associated with the Trans label (already discussed in the results section of the survey). Initially we had planned to report trans women as a distinct group from MSM, however in practise we found during the pre-assessment and formative phase this would be extremely challenging because of the diverse understanding respondents had of the transgender label throughout the country. It is interesting to note that the study in Nicaragua reported very similar challenges and ultimately had to abandon attempts to stratify the data between MSM and trans women.

Thus, for our third approach to size estimates in trans women, we used an Eligible Participant multiplier that calculated percentages of trans women based on self-identification with the transgender label as well as gender identity/expression within the broader context of respondents born as biological males and having sex with other men in the last year.

Thus in this approach, we recoded trans women in each dataset as individuals who either specifically identified as trans or identified their gender as female. We then calculated how many trans women (based on these criteria) were in each dataset, and what percentage of the total number of eligible participants (biological males who had sex with men) respondents identified as trans. We then calculated the average number of eligible participant respondents in the study identifying as trans, and applied this number to the estimated median number of eligible participants in each country.

The table summarizes the calculation for both of the methods used to calculate the trans women estimates.

Table 145. Eligible Participant Multiplier Methods used for Trans Women

trans = 120 / 10.4712%	Based on Eligible Study Participant Estimates, median *0.0864		Estimate 596		
		Median	5,696	0.5%	**Percent of males between 15 and 64 years old
		Mean	6,776	0.59%	

Population Size Estimates Based on Unique Object Multiplier Method

A total number of memorable unique objects were distributed to MSM and trans women a couple weeks prior to the commencement of the study by outreach workers who know how to find each of these populations. Afterwards, participants from these groups who were taking the survey were asked during the survey whether they have seen or received this object before from a person who is working on this study.

Using these two data sources, the multiplier method provides a population size estimate with the formula: N = M / P

Where N is the estimated key population size, M is the total number of unique objects distributed in the survey location, and P is the proportion of the key population reporting in the survey questionnaire that they received the unique object.

Size Estimation Based on Wisdom of the Crowds (WOTC) Methodology

The Wisdom of the Crowds methodology is based on the assumption that the average response of a population on the number of members of a group approximates or is proportional to the actual number in that population. Assumptions are that persons in a large sample have unique information about the population in question, that when asked individually their estimates are not influenced by others and that in aggregate the biases in estimates tend to cancel out. This method entails asking respondents how many MSM and trans women they estimate to be present in a particular location. The response tables and calculated estimates of the median, range and quartiles descriptive statistics obtained during the survey are available for full reference for MSM/trans women.

The WEB/Mobile APPS Multiplier Method

The Web/Mobile Apps Multiplier method assessed the utilization of the most popular “hook-up” apps and sites used by MSM and Trans Women in Belize. During the pre-formative phase of the study we used key informant interviews, individual interviews and focus group discussions to determine what were the primary web and mobile apps used by MSM in Belize to meet on line. From this, we learned that Adam for Adam followed by Grindr were the two most-used sites. The qualitative techniques also revealed that although Adam for Adam was the older, more established hook-up site, it had now been surpassed by Grindr in popularity. This was attributed in part to the GPS feature on GrindR that facilitated Belizean men to locate each other throughout the country and across the border, as well as to the popularity of the App in adjacent countries (Mexico and Guatemala). These findings were later confirmed via an MSM web and

mobile apps site monitoring exercise conducted over the course of four months. The first month enabled us to track peak days and times to conduct counts of MSM on these platforms, using personal profile and identification data to avoid double counting[xxxvii]. Due to differences in the way in which the Adam for Adam and Grindr platforms are set up and operated, distinct methods were used in how the actual counts were undertaken, and what specific measures were taken to eliminate duplicate counting. Site counts were based on current and "last activity" date/time on site. The Adam for Adam site proportions a longer time frame for recording last activity on line, allowing us to report counts based on activity from the last three months, the last three to six months, in the last six months to a year, and over a year. On GrindR we were only able to do counts based on activity from the last month. In the MSM respondent-driven sample, we asked the participants whether they had used one of the mobile applications or websites over the specified time frame.

Table 146. Adam for Adam (A4A) and Grindr User Counts in Belize over Time

n / App	Within the last 3 months	
Website or App	**A4A**	**GrindR**
	228	**1471**
Size Estimate		**965**

The results confirm information ascertained during the pre-assessment and the formative phase of the study. Namely, that GrindR was by far the most popular site. We therefore used only the GindR data over the last 3 months in our calculations. It is also important to point out the "hook-up" apps generate estimates for a sub-group of MSM and trans who, by virtue of the fact that they are on these sites, suggests that they are MSM/trans who are very much "out and about" and perhaps also those most likely to be having multiple concurrent relationships. Consequently, it is reflective of a sub-group of MSM and Trans and not reflective of the total numbers. Consequently, we did not use the findings in the overall number calculations, and only provide them here, as an estimate for a critical group that needs to be on the epidemiological radar.

Two parameters were then used: the number of MSM found on GrindR over a three month period = n; and the proportion of MSM in the RDS survey that reported using the online mobile/web app to arrange connect or arrange sex. The Size Estimate of "out and about" MSM in Belize was therefore calculated to be 965 (i.e. 1471 x 0.656).

Summary Tables of Population Size Estimates by Population MSM and Trans Women

Table 147. Summary of Size Estimates for MSM in Belize by country and District

MSM Country-wide Estimate for Belize Country Wide
The point estimate for Men who Have Sex with Men in Belize country-wide is ***9,891***[xxxviii] with a range based on Confidence Level of 95% from 2,070 (95% CI[xxxix] Lower Value) to 15,750 (95% CI Higher Value)
MSM District-wide Estimate for Belize District
The point estimate for Men who Have Sex with Men in Belize district is ***4,995*** with a range based on Confidence Level of 95% from 534 (lower range[xl]) to 8,488 (95% CI Higher Value)
MSM District-wide Estimate for Orange Walk District
The point estimate for Men who Have Sex with Men in Orange Walk district is ***2,207*** with a range based on Confidence Level of 95% from 227 (95% CI Lower Value) to 3,751 (95% CI Higher Value)
MSM District-wide Estimate for Cayo District
The point estimate for Men who Have Sex with Men in Cayo district is ***4,027*** with a range based on Confidence Level of 95% from 415 (95% CI Lower Value) to 6,843 (95% CI Higher Value)
MSM District-wide Estimate for Corozal District
The point estimate for Men who Have Sex with Men in Corozal district is ***1,251*** with a range based on Confidence Level of 95% from 129 (95% CI Lower Value) to 2,126 (95% CI Higher Value)
MSM District-wide Estimate for Stann Creek District
The point estimate for Men who Have Sex with Men in Stann Creek district is ***1,889*** with a range based on Confidence Level of 95% from 195 (95% CI Lower Value) to 3,210 (95% CI Higher Value)
MSM District-wide Estimate for Toledo District
The point estimate for Men who Have Sex with Men in Toledo district is ***1,586*** with a range based on Confidence Level of 95% from 163 (95% CI Lower Value) to 2,695 (95% CI Higher Value)

Table 148. Summary of Size Estimates for Trans Women in Belize by Country and District

Trans Women (TW) Country-wide Estimate for Belize Country Wide
The point estimate for Transgender women in Belize country-wide is ***596***[xli] with a range based on Confidence Level of 95% from 195 (95% CI[xlii] Lower Value) to 832 (95% CI Higher Value)
TW District-wide Estimate for Belize District
The point estimate for Men who Have Sex with Men in Belize district is ***301*** with a range based on Confidence Level of 95% from 98 (95% CI Lower Value) to 420 (95% CI Higher Value)
TW District-wide Estimate for Orange Walk District
The point estimate for Transgender women in Orange Walk district is ***133*** with a range based on Confidence Level of 95% from 43 (95% CI Lower Value) to 186 (95% CI Higher Value)
TW District-wide Estimate for Cayo District
The point estimate for Transgender women in Cayo district is ***243*** with a range based on Confidence Level of 95% from 79 (95% CI Lower Value) to 339 (95% CI Higher Value)
TW District-wide Estimate for Corozal District
The point estimate for Transgender women in Corozal district is ***75*** with a range based on Confidence Level of 95% from 25 (95% CI Lower Value) to 105 (95% CI Higher Value)
TW District-wide Estimate for Stan Creek District
The point estimate for Transgender women in Stann Creek district is ***114*** with a range based on Confidence Level of 95% from 37 (95% CI Lower Value) to 159 (95% CI Higher Value)
TW District-wide Estimate for Toledo District
The point estimate for Transgender women in Toledo district is ***96*** with a range based on Confidence Level of 95% from 31 (95% CI Lower Value) to 133 (95% CI Higher Value)

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[xviii]

		About how much money do you earn per month in BZ dollars?			
		Lowest income	Middle income	Highest income	Total
Has someone ever forced you to have sex when you did not want to?	Yes	16	12	3	31
		13,4%	7,6%	8,1%	9,9%
	No	103	145	34	282
		86,6%	92,4%	91,9%	90,1%
Total		119	157	37	313
		100,0%	100,0%	100,0%	100,0%

[xix]

		About how much money do you earn per month in BZ dollars?			
		Lowest income	Middle income	Highest income	Total
Have you ever had anal sex without a condom in the last 3 months?	Yes	41	31	4	76
		45,1%	27,0%	17,4%	33,2%
	No	50	84	19	153
		54,9%	73,0%	82,6%	66,8%
Total		91	115	23	229
		100,0%	100,0%	100,0%	100,0%

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[xxx] Sexual violence & individuals who identify as LGBTQ Research Brief . Available at: http://www.nsvrc.org/sites/default/files/Publications_NSVRC_Research-Brief_Sexual-Violence-LGBTQ.pdf

[xxxi] We selected the broader age range of 15 to 64, rather than 15 to 49, due to the fact that that we found sexually active female sex workers and MSM into their 60s throughout the OECS during the formative phase of the study. It was also the cut off age used in the selection criteria.

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[xxxiii] Adapted from Sabin K, Zhao J, García Calleja JM, Sheng Y, Arias García S, Reinisch A, et al. (2016) Availability and Quality of Size Estimations of Female Sex Workers, Men Who Have Sex with Men, People Who Inject Drugs and Transgender Women in Low-and Middle-Income Countries.PLoSONE11(5):

[xxxiv] We did not use the Jamaica prevalence rate because the methodology was robust, the extremely hostile environment makes it very difficult for many MSM in Jamaica to disclose about their sexual orientation and this is listed as an important limitation of the study that weakens the reliability of the prevalence estimate.

[xxxv] According to Hottes et al. (2015) and Berg et al. (2006), MSM population size estimates derived from such questionnaires could underestimate the true population size by 30% – 40%.
[xxxvi] Bureau of Statistics Guyana (2012 Census).
[xxxvii] During the initial site monitoring visits, we did spot checks on Adam for Adam and Grindr during a period of four weeks to learn about how the sites were set up and operated, and to determine peak times for users. From this, we determined a degree of consistency in traffic flow across both sites. Overall, Mondays through Thursdays had considerably less traffic than Fridays to Sundays. However, those who were connected during the working week tended to be online for much longer periods. Obvious spikes in users occurred from Friday to Sunday, with the highest spikes occurring after 4pm and peaking generally after 10pm. Based on this preliminary assessment we subsequently carried out counts on Grindr during the week (Monday through Thursday at 10am, 4pm and 10pm; and on weekends (Fridays through Sundays) at 10am, 8pm, 10pm and midnight during an additional month. Because the Adam for Adam site provides a date of last use within the last 12 months, we were able to carry out counts within the last 3 months, between 3 and 6 months, between 6 months and a year, and over a year. This was not possible on Grindr, and so we were only able to conduct a single monthly count for three months.
[xxxviii] Based on the median obtained through triangulation of the size estimate methodologies used.
[xxxix] Confidence level
[xl] The lower range was based on the total number of eligible participants recruited to the study that resided in Belize district.
[xli] Based on the median obtained through triangulation of the size estimate methodologies used.
[xlii] Confidence level