HHS Public Access

Author manuscript

Sex Health. Author manuscript; available in PMC 2022 January 08.

Published in final edited form as:

Sex Health. 2018 February ; 15(1): 29–38. doi:10.1071/SH17042.

A multi-method study of health behaviours and perceived concerns of sexual minority females in Mumbai, India

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Abstract

Background: This multi-method study explores the perceived health status and health behaviours of sexual minority (i.e. self-identifying with a sexual identity label other than heterosexual) females (i.e. those assigned female at birth who may or may not identify as women) in Mumbai, India, a population whose health has been generally absent in scientific literature.

Methods: Using community-based participatory research approaches, this study is a partnership with The Humsafar Trust (HST). HST is India's oldest and largest LGBT-advocacy organisation. An online survey targeted towards sexual minority females was conducted ($n = 49$), with questions about sexual identity, perceived health and wellbeing, physical and mental healthcare access and experiences, and health behaviours (including substance use). Additionally, photo-elicitation interviews in which participants' photos prompt interview discussion were conducted with 18 sexual minority females.

Results: Sexual minority females face obstacles in health care, mostly related to acceptability and quality of care. Their use of preventative health screenings is low. Perceived mental health and experiences with care were less positive than that for physical health. Participants in photo-elicitation interviews described bodyweight issues and caretaking of family members in relation to physical health. Substance use functioned as both a protective and a risk factor for their health.

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Conflicts of interest

The authors declare no conflicts of interest.

Conclusion: Our findings point to a need for more resources for sexual minority females. Education on screening guidelines and screening access for sexual minority females would also assist these individuals in increasing their rates of preventative health.

Keywords

LGBT; mental health; substance use; women's health.

Introduction

Sexual minority females in India

Sexual minority females (the term used in this paper, abbreviated as SMF) are individuals designated 'female' at birth and who do not identify as heterosexual. This term includes flexibility in gender identity, although the gender identity labels available to females in India are extremely limited.1,[A] SMF in India face stigma and discrimination based on gender and sexual identity.[2,3] The social and legal acceptance of sexual minority individuals in India has fluctuated historically, and currently same-sex sexual behaviour is illegal. SMF, who were already negotiating their position in relation to multiple systems of oppression (e.g. gender, caste, socioeconomic status),[4,5] were once again considered criminals.

There is a dearth of research on SMF in India. Given the risk factors for negative health outcomes for sexual minority individuals (such as mental health disorders for SMF in Western contexts),[6] it is important to understand health and healthcare experiences SMF in India. SMF may not be accessing health care as frequently or receiving the same quality of care as heterosexual females, due to discrimination or fear of discrimination from providers.

Physical health

SMF are considered at risk for breast and cervical cancers, in part due to reduced access to care as well as their higher rates of tobacco and other substance use.[7] Breast and cervical cancer are the most common cancers for women in Mumbai.[8] The screening behaviours of SMF have not been examined for these cancers. Literature on the prevalence and risk for breast cancer among SMF is conflicting (for a review see 9), but they have been found to have higher rates of risk factors for breast cancer such as obesity, alcohol use, tobacco use, lower rates of parity and birth control pill use.[6] One US-based study found low rates of cervical cancer knowledge among SMF.[10] US-based studies cite higher risks of cervical cancer for lesbian women due to screening barriers (including earlier sexual debut, increased number of sexual partners, fear of discrimination and less knowledge about screening guidelines).[11,12]

Mental health

SMF in Mumbai perceived their mental health as a more important health dimension than their physical health.[3] India's mental health services needs are unmet due to a lack of

[A]Given this limitation, many gender minority females are assumed to be a 'girl/woman' in Indian society. As the majority of sexual minority females *do* identify as women and due to data limitations, we refer to the literature about women and use the source's gender terminology.

providers.[13] For women, both reduced autonomy and gender discrimination affects health and healthcare seeking. For example, one study of nearly 2500 women in India found that 65% of women had mixed anxiety-depressive disorder, which was significantly associated with indicators of gender discrimination such as sexual violence and low autonomy in decision-making.[14] Although the effect of sexual identity on females' mental health in India has not been explored, lesbian, gay and bisexual individuals in other countries have been found to have higher rates of suicidal ideation and risk for depression and anxiety disorders.[15] Sexual minority men in Mumbai had high rates of suicidality, clinical depression and anxiety disorders.[16] These rates may be revealing of the climate for sexual minority individuals in general in Mumbai.

Substance use

Substance use may be an important coping mechanism for SMF given societal stigma and discrimination based on gender and sexual identity. Lesbian and bisexual women in the US have a higher risk of alcohol and substance dependence compared with heterosexual individuals or sexual minority men.[15] The substance use of SMF may be important to address for their health and wellbeing, because of the direct effects of substance use, as well as the correlates (e.g. mental health disorders) and community-level effects (e.g. impaired driving).

Current study

To better characterise the health of SMF in India, we conducted a multi-method study using an online survey and photo elicitation interviews (PEI). PEI facilitate participant discussion of abstract phenomena and enhance researchers' understanding of the phenomena by using photos to ground interview discussion.[17] The survey provided context for general health behaviours and experiences while the PEI were used to examine the subjective experiences of SMF. By putting these methods in dialogue with one another, we can improve alignment between health programs and services for SMF and how they perceive their health needs.

Methods

We used a community-based participatory research approach in partnership with The Humsafar Trust (HST), India's oldest and largest LGBT-advocacy organisation, and their subgroup that focussed on SMF, Umang. Both the survey and the photo-elicitation interviews (PEI) protocols were informed by HST recommendations, verified (for content and translation accuracy) by HST's internal review board, and then reviewed and approved by Indiana University's institutional review board. The study is based in Mumbai due to the HST's base being in the city.

Participants

Inclusion criteria for both PEI and the survey included being at least 18 years of age, living in Mumbai, identifying as a female and self-identifying with a sexual identity label other than 'heterosexual.' Participants were recruited through HST's social media (i.e. announcements to Facebook groups) and word of mouth.

Data collection tools

As our community partners recommended an online survey of baseline health and behaviours, participants completed an online questionnaire in order to explore health-related strengths and challenges ($n = 49$). The survey assessed demographics, domains of wellbeing (as measured by the World Health Organization-5 Well-Being Index), physical health, substance use, sexual identity, mental health and other health behaviours (see Table 1 for the relevant questionnaire items).

Additionally, we conducted PEI with 18 separate participants. Participants were asked to take digital photographs that represented their social support (relevant physical and mental health aspects are reported here). Guidelines included: the participant must have taken all photos, only five photos could be brought to the interview and no identifiable information could be included (e.g. faces). Interview questions were prompted by the photos and addressed participants' health behaviours and social support. Interviews were conducted in the participants' preferred language (English or Hindi), with a female research assistant (identified by HST) providing translation, if needed. Participants selected their own pseudonyms and we have used these throughout this manuscript.

Data processing and analyses

For the survey data, univariate statistics analysed all of the behavioural variables using SPSS v.22 (Chicago, IL, USA). An Indian-based translation company transcribed the audio recordings of the interviews. Then, three undergraduate student volunteers at Indiana University proofread them for spelling and grammar. Using Dedoose software (Los Angeles, CA, USA),[18] a team of three coders created a codebook using inductive analysis (thematic structuring did not use a prior established framework).[19] Reliability was established (Cohen's Kappa coefficient of at least 0.8) using Dedoose's test function, then two coders (JB, EB) coded each interview. Photos were coded for content and their use (i.e. how photos tied to interview narratives) by participants.

Results

Table 2 includes the demographic information of the 49 survey participants, though response rates varied by question and percentages will be reported accordingly. The demographic information of the 18 PEI participants is included in Table 3. Both groups are highly educated, predominately under 30 years of age, with approximately half identifying as 'lesbian.' Findings from both survey data and PEI data are reported for each health-related dimension.

Physical health

Most survey participants (66.6%, $n = 28$) described their general physical health as 'good' or 'very good', with slightly fewer reporting the same for mental health (50%, $n = 21$). Their subjective quality of life was poor, with 54.8% ($n = 23$) participants in the lower half of the WHO-5 Well-being Index. The items in this index that were rated lowest were 'I have felt active and vigorous' and 'I woke up feeling fresh and rested'.

In relation to lifetime breast cancer screening, 35.6% (n = 16) of participants had either examined themselves or had a doctor examine them. A lower percentage of participants had ever been checked for cervical cancer (13.3%, n = 6). A high proportion of participants had not been checked but would like to (breast cancer: 44.4%, n = 20, cervical cancer: 55.6%, n = 25).

Most participants had never been tested for sexually transmissible infections (STI) (80%, n = 36). Yet nearly half (49%, n = 22) of participants had experienced some sort of genital symptoms often associated with STI (frequent genital itching, unusual vaginal discharge, bad odour from the vagina, rash around the vulva area, vaginal blisters or sores, and pain in the vagina during intercourse). In talking to healthcare providers, 30.2% (n = 13) of participants were 'slightly uncomfortable' or 'very uncomfortable' discussing sexual health.

In the PEI phase of the study, three participants described supporting their families, specifically their mothers, in health issues such as breast cancer and dementia by attending doctor's appointments with them or taking care of them at home. '*This time I used to tell my mom that we have fought with* [breast cancer] *last time and we can again fight with it. I was the support system this time for my mom.*' (Aditi, 25 years old). In addition to caretaking, a couple of participants also discussed how either they felt like they were unable to get sick or discuss illness with people not as close to them. '*I wasn't even allowed to get sick. I used to get scared of having a cold because I would pass it to my mom.*' (Cheeky de Ville, 51 years old).

The most common concern reported that related to physical health in PEI was bodyweight or shape, which has connections to mental health as well (see Fig. 1 for participants' photos). Rohini (45 years old) wanted to lose weight to get back into her previous athletic shape as well as to make her ex-girlfriend jealous. Namrata (30 years old) lost weight after a break up and was attempting to get back her shape with eating healthier. This is tied to the importance of food and eating for mood regulation and social support for many participants. Skully described her passion for food and her mother's pressure about her body size: '*My mom hates that idea that food is so important for me because she thinks I've put on so much weight. And she thinks I need to reduce the food I eat, and what I eat, where I eat, how I eat.*' (Skully, 24 years old).

Mental health

According to survey data, half of participants described their mental health as 'fair' or 'poor' (50%, n = 21). More than half (55.8%, n = 24) of participants had accessed mental healthcare services previously and most were 'satisfied' or 'very satisfied' with the care they received (70.8%, n = 17). Nearly 21% (n = 9) reported that they did not know of a mental healthcare provider that could help them if they needed it.

In the PEI, many participants described negative mental health states, including depression and anger (see Fig. 2 for participants' photos). Aditi felt a strong sense of responsibility as a daughter, and it was her parents' intervention and acceptance that motivated her to live: '*There was this point where I felt... my life is over. I tried to commit suicide once and that was the time when my parents said, 'You have to live for yourself and you have to live for*

us because if after all these things we accept you the way you are, *what's stopping you*?" (Aditi, 25 years old). Sid described hitting a partner in a relationship out of anger, and began working out to release her anger and improve her self-confidence.

Many PEI participants described positive mental healthcare provider experiences through referrals from LGBT-friendly organisations (e.g. The Humsafar Trust). Outside of these referrals, their experiences were negative and occasionally perceived as harmful. '*At one point they even bribed the doctor like* '*You are a bisexual*; *your blood report proves it.*' *I said*, '*I don't know how blood group proves that you are a bisexual or not*'.' (Namrata, 30 years old). Aditi (25 years old) took her parents to a counsellor to help them accept her sexual identity: '*I knew that if I take them to a straight counselor they are going to tell us*, '*This is something* [that is] *not natural*, *we will give you medicines*' *and* '*This can be cured*'.'.

Medication in relation to mental health was only discussed negatively. Peppy's negative experience with a mental healthcare provider's prescription of sleeping pills led her eventually to attempt suicide.

> '*I went to psychiatrist but she didn't look at me and I didn't ask anything. She asked my mom what's wrong and I don't know what happened. She never asked me exactly what is wrong. What she did is she gave me lots of sleeping pills and I gained a lot of weight. I constantly didn't like it. But I couldn't tell my mom that something was happening. It was only at the end that it was too much for me to take it. My mom's a nurse*, *so I used her account and took a little bit of pills*, *an overdose.*' (Peppy, 23 years old).

S.D. describes acquiescing to her mother's desire for her to take medications in order to provide proof that medications would not make her heterosexual.

> '[My mom] *said*, '*No*, *you need medications*, *you're not alright*'...*I will do it for her*, *so she does not feel threatened that I am not listening to her and something is going to go wrong. Even if I take the medication*, *it's not going to alter me in any way. I wanted to prove to her that even after a long time of taking medications* [my identity has] *not changed.*' (S.D., 29 years old).

Substance use

In the survey, alcohol was the most commonly reported substance used, with the majority (45%, $n = 19$) drinking 'sometimes' (two to three times a month). The most recent alcohol use involved three or more drinks in one sitting for nearly 37.0% ($n = 17$) of participants. Smoking cigarettes was common among participants, with 56.5% of participants smoking at all and 48% ($n = 12$) of users smoking 'often' (one to five cigarettes a day) or 'very often' (five or more cigarettes a day). Nearly 35% ($n = 16$) of participants used marijuana, with most users (75%, $n = 12$) smoking 'rarely' (once every few months).

In PEI, participants described substance use as either a key part of their social support with other individuals or as an unhealthy coping mechanism during times of depression or stress (see Fig. 3 for photos). Although interviewers did not ask about substance use specifically,

participants readily discussed tobacco and alcohol use. Tobacco use was discussed as a coping mechanism in times of stress and as necessary when drinking alcohol: '*For drinking I need smoking otherwise I just cannot drink.*' (Namrata, 30 years old).

For those using tobacco or alcohol as a part of social support, it was often ritualised in terms of the place or when it was done. Kristin (27 years old) described the relaxation of smoking hookah with her friends as a ritual, '*My friend circle would meet and have hookah and talk about the random stuff, how to flirt with girls*.' Alcohol created bonding experiences outside of a friend group. Yanna (25 years old) discussed coming out to her mother when they both were drunk, and Kristin described coming out to her boss after drinking at a bar with him. This part of socialisation with others requires money and time investment, as Cheeky de Ville (51 years old) described wanting to build and maintain her social network but was unable to go out late at night and had to get up early to take care of her ailing mother. Bisexual interviewees discussed substance use the least, and did not describe the ritualisation of it. In addition to the community connection through substance use by gathering together, Harshada described the perceived judgment from heterosexual individuals compared with her sexual minority friends that support her health:

> '*If I am smoking* [my sexual minority friends] *actually stop me from that. It's like* '*Don't smoke now, maybe after 2 hours or something you can actually smoke next.*' *They don't stop me or tease me about it. It is just that they are concerned about me. I don't get that from my other* [straight] *friends*.' (Harshada, 23 years old)

Discussion

This study contributes to the small amount of available data on the health of SMF in India, and to the authors' knowledge, is the first use of visual methods to research the health of SMF in India. Findings point to a lack of preventative health care and a need for mental health services. The use of PEI provided a subjective perspective of motivations, experiences and reactions regarding health for SMF.

The lack of screenings may be tied to the availability of (known) testing centres and discrimination by providers. SMF are often not perceived at risk for STIs, as seen in the US whereby lesbian and bisexual women reported low knowledge of STIs and barrier usage.[20] There may also be misunderstandings regarding the outcomes and differences between Pap smears and pelvic exams.[21] The lack of preventative cancer screenings and STI testing is likely also influenced by the societal expectation of women's modesty in revealing their body and silence around sexuality with healthcare providers.[3,5] Increasing the number of providers that are accepting of SMF and trained in sexual minority and gender issues may increase uptake of preventative and reproductive healthcare services.

The ways participants described caretaking of their mothers and minimising their own health concerns is not uncommon globally.[22,23] Many of our participants discussed taking care of their mothers with pride, possibly due to the fulfilment of this cultural duty when the expectation of daughters' heterosexual marriage was not fulfilled. Cayleff[24] writes about

another important aspect of this caretaking; for sexual minority children who were rejected or stigmatised by their parents, caregiving for their parents can be stressful.

Eating and body shape are described in PEI, and these relate to physical health (e.g. diet, exercise) as well as mental health (e.g. body image, rituals of food). The importance of food culturally and economically in Mumbai is not to be underestimated. India has undergone transitions demographically and epidemiologically; these have included increased eating outside of the home and higher rates of obesity and non-communicable diseases such as diabetes.[25] This may be of greater importance for SMF who may use food to build a community or for coping. Addressing body issued caused by family pressure through therapy or community-level campaigns could help reduce the resulting body image stress.

In comparison to physical health, mental health was perceived to be worse and more participants stated a need for mental healthcare services. The availability of providers is likely an issue, as there is a large unmet need in India overall.[13] Though estimates of sexual minority healthcare utilisation in India are unavailable, women in Mumbai have lower rates of treatment than men for health problems in general.[26] Sexual minority individuals in the US are significantly less likely to report that they have a usual place to go for medical care than heterosexuals.[27] Based on gender as well as sexual identity, we may infer that the likelihood of SMF in Mumbai having a usual health provider may be less than that for heterosexual women. The subjective wellbeing of SMF is poor; as over half of the participants would be recommended to take the Major Depression Inventory based on their low score on the Wellbeing Index. From these findings, there appear to be high rates of depressive symptomology in this population.

As described by participants in our study, research on sexual minority individuals in India has found problems with the quality of mental health care provision due to a use of conversion therapies to ‘cure homosexuality’[28] as well as forced medication.[3] One reason for the high rates of satisfaction reported in the survey with mental health services may be that participants responded based on their most recent experience, which may have been with a provider that was accepting and caring of SMF (primarily through the HST) after a negative experience with a more stigmatising provider.

Over 50% of participants in our study used tobacco and 91% drank alcohol. While more representative research is needed, it appears that SMF are engaging in more tobacco and alcohol use than other women (9.1% of women using tobacco and 2.1% using alcohol)[29] and, perhaps, even other sexual minority populations in India. Among men who have sex with men in Chennai, India, 28% reported that they used alcohol to the point of inebriation at least weekly and 25% reported weekly tobacco use.[30] Chakrapani *et al.*[31] describe the complex psychosocial context of alcohol use for sexual minority men; their reported themes of stigma and discrimination from society, healthcare systems and family (including pressure for a heterosexual marriage), as well as guilt and shame regarding sexual identity[31] were discussed by participants in our study as well. More research into the protective factors of social support in reducing substance use, as Harshada (23 years old) described her sexual minority friends encouraging her to reduce her tobacco use, may lead to important modes of intervention.

Additionally, official marijuana use estimates are difficult to obtain, but with 35% of survey participants reporting marijuana use, this may point to higher rates than in other populations. Participants did not bring any photos including marijuana; this may reflect a taboo of use or it may mean that use of it is lower than alcohol and tobacco, and that marijuana is less connected to social support than alcohol and tobacco. As SMF in a previous study did not identify substance use as a health concern for them,[3] it may be important to raise awareness of substance use guidelines in order to raise awareness regarding the effects of use.

Strengths and limitations

This study utilised principles of community-based participatory research in its collaboration with a historic, large and trusted community organisation to find out more about sexual and gender minority individuals in India. The results are strengthened by having community members contribute to the content of the survey and PEI interview guide, check Hindi language translation and discuss implications of themes. Using multiple methods assist in the triangulation of results. PEI addressed multiple ways of knowing, by providing participants with visual and verbal opportunities to describe their experience; this allowed for a deeper exploration of themes. The online survey was anonymous and this may have increased participants' comfort.

As an exploratory step, this survey included only participants based in Mumbai, as the contexts of India vary widely based on availability of resources and healthcare access. This small convenience sample restricted our ability to perform more advanced statistical analyses, but establishes baseline rates that can be explored in larger studies. Future research should examine SMF with varying levels of education, in other urban contexts as well as rural areas, and include more individuals over 30 years of age.

Implications

Due to the current scant scientific literature on the health of SMF, particularly in low-income countries including India, the multi-method approach of this study is groundbreaking in providing exploratory perceived health needs for this population. The inclusion of photography in interviews elicited themes beyond the scope of the survey (e.g. prioritising caretaking of family members). One implication that likely extends to all SMF in India is the need for increased access to both mental and physical health care. This study highlights not only negative health outcomes or risk factors, but also possible resilience strategies within the same behaviours (such as substance use as social support). Moving beyond this deficit-based approach is critical not only for broader understandings of health, but also ensures that the agency of sexual minority individuals is not erased in research.[32] The findings from this study support the need for more nuanced research on the health of SMF in India; understanding the relationships between health outcomes as well as the lived experiences of health will inform healthcare practice and advocacy.

Conclusion

Participants' physical health was perceived as being better than their mental health. Preventative healthcare screening for breast and cervical cancers, as well as STI rates, were

low. Participants described body image concerns and pressure from family as significant concerns. They also were often involved with family caregiving, which may be to the detriment to their own health. Tobacco and alcohol use were extremely common for participants, with marijuana use reported in the survey but not discussed in the PEI. Our findings provide evidence that SMF in Mumbai are utilising protective strategies to improve their mental health. Furthermore, more healthcare providers trained in sexual minority health and non-judgmental approaches in both physical and mental health are needed.

Acknowledgements

This work was supported by Indiana University's School of Public Health – Bloomington. We would like to thank the participants for sharing their experiences. We are grateful to The Humsafar Trust for their partnership in this work. This project was greatly enhanced through the wisdom and humour of Cheryl Kwok. We would also like to thank Karly Beavers, Elyse Johnson and Haeun Cho for transcription assistance. We also appreciate the wisdom of Dr. Stephanie Sanders for her feedback on the manuscript.

References

1. Monro S Transmuting gender binaries: the theoretical challenge. Sociol Res Online 2007. 12(1): 10.5153/sro.1514
2. Ghosh S, Bandyopadhyay SB, Biswas R. Vio-map: documenting and mapping violence and rights violation taking place in lives of sexually marginalized women to chart out effective advocacy strategies: a feminist qualitative research report Kolkata: Sappho for Equality; 2011.
3. Bowling J, Dodge B, Banik S, Rodriguez I, Rawata SM, Herbenick D, Guerra-Reyes L, Sanders S, Dange A, Anand V. Perceived health concerns among sexual minority women in Mumbai, India: an exploratory qualitative study. Cult Health Sex 2016; 18: 826–40. 10.1080/13691058.2015.1134812 [PubMed: 26873141]
4. Bhattacharya S A love that dare not speak its name: exploring the marginalized status of lesbians, bisexual women, and trans-men in India. Asian J Women Stud 2014; 20(3): 105–20. 10.1080/12259276.2014.11666192
5. Johnson PS, Johnson JA. The oppression of women in India. Violence Against Women 2001; 7(9): 1051–68. 10.1177/10778010122182893
6. Cochran SD, Mays VM, Bowen D, Gage S, Bybee D, Roberts SJ, Goldstein RS, Robison A, Rankow EJ, White J. Cancer-related risk indicators and preventive screening behaviors among lesbians and bisexual women. Am J Public Health 2001; 91(4): 591–7. 10.2105/AJPH.91.4.591 [PubMed: 11291371]
7. Quinn GP, Sanchez JA, Sutton SK, Vadaparampil ST, Nguyen GT, Green BL, Kanetsky PA, Schabath MB. Cancer and lesbian, gay, bisexual, transgender/transsexual, and queer/questioning (LGBTQ) populations. CA Cancer J Clin 2015; 65(5): 384–400. 10.3322/caac.21288 [PubMed: 26186412]
8. Dhillon P, Yeole B, Dikshit R, Kurkure A, Bray F. Trends in breast, ovarian and cervical cancer incidence in Mumbai, India over a 30-year period, 1976–2005: an age–period–cohort analysis. Br J Cancer 2011; 105(5): 723–30. 10.1038/bjc.2011.301 [PubMed: 21829198]
9. Meads C, Moore D. Breast cancer in lesbians and bisexual women: systematic review of incidence, prevalence and risk studies. BMC Public Health 2013; 13(1): 1127. 10.1186/1471-2458-13-1127 [PubMed: 24313963]
10. Polek C, Hardie T. Lesbian women and knowledge about human papillomavirus. Oncol Nurs Forum 2010; 37(3): E191–7. 10.1188/10.ONF.E191-E197 [PubMed: 20439205]
11. Matthews AK, Brandenburg DL, Johnson TP, Hughes TL. Correlates of underutilization of gynecological cancer screening among lesbian and heterosexual women. Prev Med 2004; 38(1): 105–13. 10.1016/j.ypmed.2003.09.034 [PubMed: 14672647]
12. Tracy JK, Lydecker AD, Ireland L. Barriers to cervical cancer screening among lesbians. J Women's Health (Larchmt) 2010; 19 (2): 229–37. 10.1089/jwh.2009.1393 [PubMed: 20095905]

13. World Health Organization. Mental health atlas. New Delhi: Department of Mental Health and Substance Abuse, WHO; 2011.
14. Patel V, Kirkwood BR, Pednekar S, Pereira B, Barros P, Fernandes J, Datta J, Pai R, Weiss H, Mabey D. Gender disadvantage and reproductive health risk factors for common mental disorders in women: a community survey in India. Arch Gen Psychiatry 2006; 63(4): 404–13. 10.1001/archpsyc.63.4.404 [PubMed: 16585469]
15. King M, Semlyen J, Tai SS, Killaspy H, Osborn D, Popelyuk D, Nazareth I. A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. BMC Psychiatry 2008; 8: 70. 10.1186/1471-244X-8-70 [PubMed: 18706118]
16. Sivasubramanian M, Mimiaga MJ, Mayer KH, Anand VR, Johnson CV, Prabhugate P, Safren SA. Suicidality, clinical depression, and anxiety disorders are highly prevalent in men who have sex with men in Mumbai, India: findings from a community-recruited sample. Psychol Health Med 2011; 16(4): 450–62. 10.1080/13548506.2011.554645 [PubMed: 21749242]
17. Hensel DJ, Newcamp J, Miles J, Fortenberry JD. Picturing sexual spaces in everyday life: exploring the construction of sexuality and sexual behavior among early adult women. Sex Res Soc Policy 2011; 8 (4): 267–81. 10.1007/s13178-011-0066-x
18. Dedoose. Dedoose: Home n.d Available online at: http://dedoose.com/ [verified 28 7 2017].
19. Thomas DR. A general inductive approach for analyzing qualitative evaluation data. Am J Eval 2006; 27(2): 237–46. 10.1177/1098214005283748
20. Marrazzo JM, Coffey P, Bingham A. Sexual practices, risk perception and knowledge of sexually transmitted disease risk among lesbian and bisexual women. Perspect Sex Reprod Health 2005; 37(1): 6–12. 10.1363/3700605 [PubMed: 15888397]
21. Head SK, Crosby RA, Moore GR. Pap smear knowledge among young women following the introduction of the HPV vaccine. J Pediatr Adolesc Gynecol 2009; 22(4): 251–6. 10.1016/j.jpag.2008.10.005 [PubMed: 19646672]
22. Grigoryeva A When gender trumps everything: the division of parent care among siblings Princeton, NJ: Center for the Study of Social Organization; 2014.
23. Alpert PT. Who's caring for the caregiver? Home Health Care Manage Pract 2014; 26(4): 266–8. 10.1177/1084822314521210
24. Cayleff S Feeding the hand that bit you: lesbian daughters at mid-life negotiating parental caretaking. J Lesbian Stud 2008; 12(2–3): 237–54. 10.1080/10894160802161398 [PubMed: 19042735]
25. Shetty PS. Nutrition transition in India. Public Health Nutr 2002; 5: 175–82. 10.1079/PHN2001291 [PubMed: 12027282]
26. Nandraj S, Madhiwalla N, Sinha R, Jesani A. Women and health care in Mumbai: a study of morbidity, utilisation and expenditure on health care by the households of the metropolis. Mumbai: Centre for Enquiry into Health and Allied Themes; 2001.
27. Ward BWD; Galinsky AM; Joestl SS Sexual orientation and health among U.S. adults: National Health Interview Survey Hyattsville, MD: National Center for Health Statistics; 2015.
28. Ranade K, Hastak Y. Growing up and sexual identity formation: mental health concerns of lesbian women. In: Davar BV, Ravindran TKS, editors. Gendering mental health: knowledges, identities, and institutions Oxford: Oxford University Press; 2015. pp. 108–30.
29. International Institute for Population Sciences. National family health survey (NFHS-3), 2005–06: India: volume I and II Mumbai: International Institute for Population Sciences. 2007.
30. Mimiaga M, Thomas B, Mayer K, Reisner S, Menon S, Swaminathan S, Periyasamy M, Johnson CV, Safren SA. Alcohol use and HIV sexual risk among MSM in Chennai, India. Int J STD AIDS 2011; 22(3): 121–5. 10.1258/ijsa.2009.009059 [PubMed: 21464447]
31. Chakrapani V, Newman PA, Shunmugam M, McLuckie A, Melwin F. Structural violence against Kothi–identified men who have sex with men in Chennai, India: a qualitative investigation. AIDS Educ Prev 2007; 19(4): 346–64. 10.1521/aeap.2007.19.4.346 [PubMed: 17685847]
32. Herrick AL, Stall R, Goldhammer H, Egan JE, Mayer KH. Resilience as a research framework and as a cornerstone of prevention research for gay and bisexual men: theory and evidence. AIDS Behav 2014; 18(1): 1–9. 10.1007/s10461-012-0384-x [PubMed: 23321946]

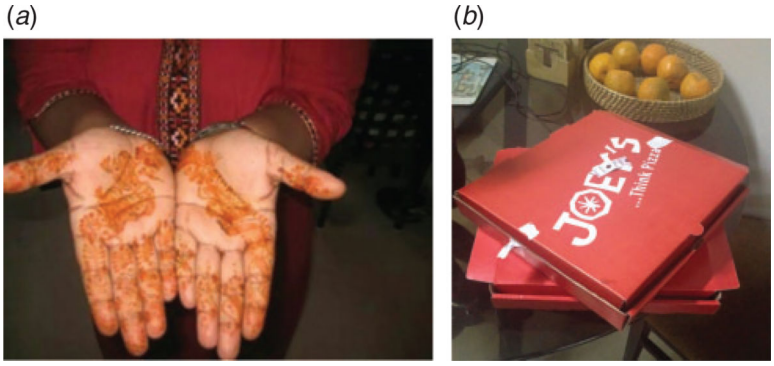

Fig. 1.

Participant photos of body shape. (*a*) Rohini (45 years old) included this photo of her hands, saying that this would be her social media profile photo until she reached her goal body shape. (*b*) Skully (24 years old) described her passion for food, though she received pressure from her mother to eat less, and that eating at Joe's Pizza was a common ritual with friends for her.

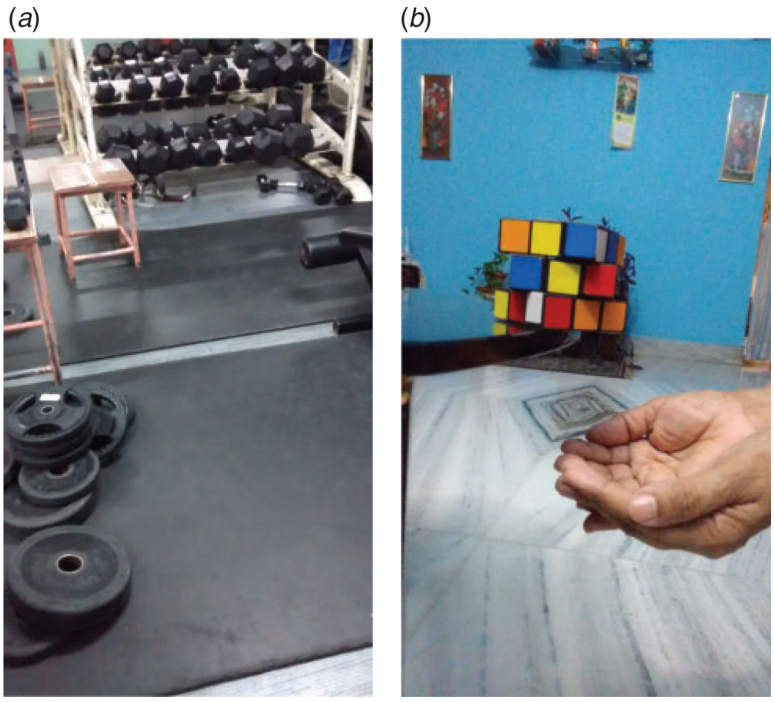

Fig. 2.

Participants photos of mental health. (*a*) Sid (23 years old) began working out at the gym to release some of her anger in a positive way. (*b*) Peppy (23 years old) described feeling like this Rubik's cube, on the edge and mixed up.

Fig. 3.

Participant photos of substance use. (*a*) Harshada (23 years old) had fun drinking early in the day at the beach with her friends. (*b*) Skully (24 years old) likes to try out new restaurants in Mumbai with friends to have new experiences, like tasting special shots. (*c*) Kristin (27 years old) and her friends smoke hookah and chat about light topics, like how to pick up girls. (*d*) Namrata (30 years old) enjoys drinking at her favourite bar where the owners are accepting of her identity, but has to have cigarettes when she drinks.

Table 1.

Survey questionnaire about health and behaviours

How do you define/describe your gender?
How old are you?
What is your sexual identity?
Lesbian/gay
Bisexual
Bi-curious
Unlabelled/prefer not to be labelled
Other
What is your employment status?
Unemployed
Part-time employed
Full-time employed
What is your own monthly income? (in Rupees)
0
1–4999 Rs
5000–9999 Rs
10 000–14 999 Rs
15 000–19 999 Rs
20 000–24 999 Rs
25 000–34 999 Rs
35 000–49 999 Rs
50 000+ Rs
What is your household monthly income?
0
1–4999 Rs
5000–9999 Rs
10 000–14 999 Rs
15 000–19 999 Rs
20 000–24 999 Rs
25 000–34 999 Rs
35 000–49 999 Rs
50 000+ Rs
What is the highest level of education you have completed?
Less than secondary school graduation
Secondary school graduation (completed 12th Standard
Some post-secondary/college
Bachelor degree complete
Some post-bachelor/Masters
Post-bachelor/Masters complete
What is your marital status?

- Unmarried
- Engaged
- Married
- Divorced
- Widowed

What is your relationship status with women?

- Single and looking
- Casual dating, more than one person
- Casual dating, only one person
- In a committed relationship with a woman
- Not looking for any woman

What is your relationship status with men?

- Single and looking
- Casual dating, more than one person
- Casual dating, only one person
- In a committed relationship with a man
- Not looking for any man

Who do you live with?

- With parents or family
- With friends
- With male romantic partner (such as boyfriend, husband)
- With female romantic partner (such as girlfriend, female spouse)
- Living alone
- Other _____

Do you smoke cigarettes?

- Never
- Rarely (1–5 cigarettes a month)
- Sometimes (1–5 cigarettes a week)
- Often (1–5 cigarettes a day)
- Very often (5 or more cigarettes a day)
- I prefer not to answer

Do you smoke marijuana/ganja?

- Never
- Rarely (1 joint every few months)
- Sometimes (1–5 joints a month)
- Often (1–5 joints a week)
- Very often (1 or more joints a day)
- I prefer not to answer

Do you drink alcohol?

- Never
- Rarely (once every few months)
- Sometimes (2–3 times a month)
- Often (1–5 times a week)

Very often (daily)

I prefer not to answer

The last time you drank alcohol, how much did you drink in one sitting? (one drink equals: one regular beer, one shot of liquor, or one glass of wine)

Less than one drink (such as one beer, one shot of liquor, or one glass of wine)

One drink

Two drinks

Three drinks

Four or more drinks

I prefer not to answer

Have you ever been checked for breast cancer (feeling or scanning for lumps in the breast)?

I've checked myself

I've been checked by a doctor

No because I can't afford it

No because I don't need it/want it

No, but I would like to

Have you ever been checked for cervical cancer (such as having a 'Pap Smear')?

Yes and I received my results

Yes but I didn't get the results

No because I didn't know about it

No because I can't afford it

No because I don't need it/want it

No but I would like to

Have you ever experienced any of the following symptoms? (Select all that apply)

Frequent genital itching

Unusual vaginal discharge

Bad odor from the vagina

Rash around the vaginal area

Vaginal blisters or sores

Pain in the vagina during sex

None of the above

I prefer not to answer

Have you ever been diagnosed with a sexually transmissible infection (STI; such as chlamydia, gonorrhoea, syphilis, HIV)?

Yes

I've been tested for infections but never tested positive for any

I've never been tested

I prefer not to answer

How would you describe your physical health (your body)?

Very good

Good

Neither good nor bad

Poor

Very poor

How would you describe your mental health (your mind)?

Very good

Good

Neither good nor bad

Poor

Very poor

Please indicate for each of the five statements which is closest to how you have been feeling over the last 2 weeks (All of the time, Most of the time, Half of the time, Some of the time, At no time)

I have felt cheerful and am in good spirits

I have felt calm and relaxed

I have felt active and vigorous

I woke up feeling fresh and rested

My daily life has been filled with things that interest me

How would you describe your satisfaction with mental health services?

Very satisfied

Satisfied

Unsatisfied

Very unsatisfied

If you aren't feeling mentally well, do you know of a counsellor or therapist that could help you?

Yes, with no problems in access

Yes, but only for emergencies

Yes, but I don't like the ones I know

No, I don't know any

How comfortable are you discussing sexual health (such as wanting children or not, your sexual identity, your STI status) with healthcare providers (such as doctors, therapists)?

Very comfortable

Comfortable

Uncomfortable

Very uncomfortable

Table 2.

Demographic details of survey participants (N=49)

Age (mean/standard deviation	25.6 (4.6)
Gender (*n* = 41)	Total % (*n*)
Female/Cis-female	58.5 (24)
Woman/Cis-woman/Girl	19.5 (8)
Non-feminine woman	4.9 (2)
Androgynous	4.9 (2)
Feminine	2.4 (1)
Gender-fluid female	2.4 (1)
I wish I was a guy	2.4 (1)
Genderless	2.4 (1)
Human/person	2.4 (1)
Education (*n* =46)	
Less than high school	0
High school	6.5 (3)
Some college	10.9 (5)
Bachelor's Degree	28.3 (13)
Some post-Bachelor's Degree	10.9 (5)
Post-Bachelor's Degree/Master's Degree Complete	43.5 (20)
Sexual identity (*n* = 49)	
Lesbian/gay	55.1 (27)
Bisexual	26.5 (13)
Bicurious	2.0 (1)
Unlabelled	8.2 (4)
Other	8.2 (4)
Marital status (*n* = 45)	
Unmarried	88.9 (40)
Engaged	2.2 (1)
Married	6.7 (3)
Divorced	2.2 (1)
Widow	–

Monthly personal income in Rupees ($n = 47$)	
0	21.3 (10)
1–4999	8.5 (4)
5000–9999	0
10 000–14 999	4.3 (2)
15 000–19 999	10.6 (5)
20 000–24 999	10.6 (5)
25 000–34 999	10.6 (5)
35 000–49 999	17.0 (8)
50 000+	17.0 (8)
Living situation ($n = 47$)	
With parents/family	53.2 (25)
With friends	10.6 (5)
With male romantic partner (such as boyfriend, male spouse)	2.1 (1)
With female romantic partner (such as girlfriend, female spouse)	10.6 (5)
Living alone	19.1 (9)
College housing	4.3 (2)

Relationship status ($n = 47$)	With men	With women
Single and looking	12.8 (6)	40.4 (19)
Casual dating more than one person	4.3 (2)	19.1 (9)
Casual dating only one person	2.1 (1)	6.4 (3)
In a committed relationship	12.8 (6)	21.3 (10)
Not looking for a man/woman	68.1 (32)	12.8 (6)

Employment category ($n = 33$)	
Research	15.1 (5)
The Arts (music, dance, photography, film)	15.1 (5)
Writing/Journalism	12.1 (4)
Office worker	15.1 (5)
Non-governmental organization	6.1 (2)
Family or self-owned business	9.1 (3)
IT/Digital marketing	9.1 (3)
Student	3.0 (1)

Lawyer	3.0 (1)
Engineer	3.0 (1)
Unskilled labour	6.1 (2)

Table 3.

Demographic details of photo-elicitation interview participants ($n = 18$)

Pseudonym	Age (years)	Gender identity	Sexual identity	Education level
Cheeky de Ville	51	Feminine	Alternate lifestyle	Associate Degree
Peppy	23	Female	Bisexual	Masters Degree
Rohini	45	Female	Lesbian	Bachelor Degree
Kristin	27	Female	Lesbian	Masters Degree
Namrata	30	Female	Lesbian	Masters Degree
S.D.	29	Female	Lesbian	Bachelor Degree
Bhakti	23	Woman	Bisexual	Bachelor Degree
Wolfgang	20	Female	Bisexual	Some college
Skully	24	Female	Queer	Masters Degree
Yanna	25	Cisgender woman	Bisexual	Masters Degree
Sid	23	Andro	Lesbian	Bachelor Degree
Aamig	21	Girl	Lesbian	Some college
Gona	25	Human	Into women	High school
Aditi	25	Female	Lesbian	High school
Harshada	23	Woman	Lesbian	Bachelor Degree
Sonal	28	Andro	Bisexual	Bachelor Degree
Prachi	25	Unlabelled	Lesbian	Bachelor Degree
Ironica	22	Woman	Bisexual	Bachelor Degree