

# **HHS Public Access**

Author manuscript *AIDS Educ Prev.* Author manuscript; available in PMC 2016 July 29.

Published in final edited form as:

AIDS Educ Prev. 2016 April; 28(2): 153-164. doi:10.1521/aeap.2016.28.2.153.

## Friends, sisters, and wives: Social support and social risks in peer relationships among men who have sex with men (MSM) in India

Cecilia Tomori, PhD, MA<sup>1</sup>, Aylur K. Srikrishnan, BA<sup>2</sup>, Kathleen Ridgeway, MSPH<sup>3</sup>, Sunil S. Solomon, PhD, MPH, MBBS<sup>4</sup>, Shruti H. Mehta, PhD, MPH<sup>5</sup>, Suniti Solomon, MD<sup>6</sup>, and David D. Celentano, ScD, MHS<sup>7</sup>

Cecilia Tomori: ctomori1@jhu.edu; Aylur K. Srikrishnan: krish@yrgcare.org; Kathleen Ridgeway: kridgew1@jhu.edu; Sunil S. Solomon: sss@jhmi.edu; Shruti H. Mehta: smehta@jhu.edu; Suniti Solomon: suniti@yrgcare.org; David D. Celentano: dcelent1@jhu.edu

<sup>1</sup>Johns Hopkins Bloomberg School of Public Health, Department of Epidemiology, Baltimore, Maryland, USA

<sup>2</sup>YR Gaitonde Centre for AIDS Research and Education, Chennai, India

<sup>3</sup>Johns Hopkins Bloomberg School of Public Health, Department of International Health, Baltimore, Maryland, USA

<sup>4</sup>Johns Hopkins School of Medicine, Department of Medicine, Baltimore, Maryland, USA

<sup>5</sup>Johns Hopkins Bloomberg School of Public Health, Department of Epidemiology, Baltimore, Maryland, USA

<sup>6</sup>YR Gaitonde Centre for AIDS Research and Education, Chennai, India

<sup>7</sup>Johns Hopkins Bloomberg School of Public Health, Department of Epidemiology, Baltimore, Maryland, USA

## Abstract

Globally men who have sex with men (MSM) are at high risk for HIV. Many HIV-prevention efforts rely on community outreach and mobilization to engage MSM. This study examines peer relationships and their potential role in HIV-prevention through 31 focus group discussions (FGDs) and 121 in-depth interviews (IDIs) with 363 MSM across 15 sites in India. Results indicate that MSM receive social support in friendships, sex-worker collaborations, constructed kin relationships, and romantic partnerships. Access to these relationships, however, is uneven across MSM, and can carry risks of disclosure of same-sex behavior and exclusion based on HIV-positive status. Positive peer relationships can serve as the basis of community empowerment, education and couple-based interventions for MSM, and peer counselors can also provide a buffer against the social risks of peer relationships can improve HIV-interventions for MSM in India and elsewhere.

Corresponding author: Cecilia Tomori, PhD, Johns Hopkins Bloomberg School of Public Health, Department of Epidemiology, 615 N. Wolfe Street, E6648, Baltimore, MD 21205, ctomori1@jhu.edu, Telephone: (410) 502-5202. No conflicts of interest are declared.

#### Keywords

Men who have sex with men; HIV-prevention; India; peer relationships; social support

## INTRODUCTION

Despite significant global progress in reducing HIV prevalence, men who have sex (MSM) remain at elevated risk for HIV (Beyrer et al., 2012; Beyrer et al., 2013). In India, MSM face 14-25 times higher prevalence than the general population (National Institute of Medical Statistics and National AIDS Control Organisation, 2012). Although efforts are underway to improve the availability and accessibility of HIV services for MSM, these initiatives are hindered by the continued criminalization of homosexuality and the complex sociocultural context of male-to-male sexual behavior in India. While male-to-male sexual contact is common and may not be considered homosexuality (Asthana & Oostvogels, 2001; Khan, 2001; Verma & Collumbien, 2004), identifying as a homosexual and gender non-conformity in behavior or appearance continues to be highly stigmatized (Logie, Newman, Chakrapani, & Shunmugam, 2012; Mimiaga et al., 2014; Sivasubramanian et al., 2011; B. Thomas et al., 2012; Thomas et al., 2009; Tomori et al., 2015). Moreover, cultural norms of masculinity demand marriage to a woman and the procreation of children, leading many MSM to marry and keep their sexual behavior hidden (Asthana & Oostvogels, 2001; Chakrapani, Boyce, & Dhanikachalam, 2011; Chakrapani, Newman, Shunmugam, & Dubrow, 2011; Kumta et al., 2010; Mimiaga et al., 2014; A. E. Phillips et al., 2010; S.S. Solomon, Mehta, Latimore, Srikrishnan, & Celentano, 2010).

MSM in India occupy a diverse set of sexual identities, with local variation in terminology, concepts of identity, and sexual practices, including men who do not label their sexual identity at all (Asthana & Oostvogels, 2001; Boyce, Chakrapani, & Dhanikachalam, 2011; Chakrapani, Newman, & Shunmugam, 2008; Khan, 2001; Patel, Mayer, & Makado, 2012; A. Phillips et al., 2009; Setia et al., 2008). Previous research has identified several identities that are widely used in contemporary India: kothi, who align with more feminine gender characteristics and predominately practice receptive anal sex; *panthi* or *girva*, who identify with more masculine gender traits and generally practice insertive anal sex; double decker (DD), who may present as either masculine or feminine, and practice both receptive and insertive sex; and *bisexual* and *gay* identities; all of which may be situationally fluid and change over time (Asthana & Oostvogels, 2001; Boyce et al., 2011; Khan, 2001; Patel et al., 2012; A. Phillips et al., 2009; Setia et al., 2008). Some who are born as men also identify as *hijra*, a third gender in India, or transgender women, and may or may not undergo castration (Reddy, 2005). Sexual preferences associated with these social identities have significant implications for HIV risk, since those who practice unprotected receptive anal intercourse are at higher risk for HIV transmission (Chakrapani et al., 2008; Chakrapani, Newman, et al., 2011; Jha et al., 2014; Narayanan et al., 2012; A. Phillips et al., 2009; Woodford, Newman, Chakrapani, Shunmugam, & Kakinami, 2012). The complexity of these identities across diverse regions of the country presents a challenging setting for designing effective HIV-prevention interventions among MSM in India.

To reduce HIV acquisition and transmission, research efforts have addressed high-risk sexual behavior, and improving access to testing and treatment. Community outreach and community mobilization are key elements of many such efforts, usually employing local nongovernmental organizations with familiarity and access to populations of interest (Boyce et al., 2011; Saggurti et al., 2013; Thomas et al., 2012; Thomas et al., 2011). While the success of these efforts relies on these groups' ability to build relationships with men who occupy a diverse set of social-sexual identities, there is little discussion of the social relationships among MSM beyond sexual encounters in public health literature. Qualitative research also suggests that many MSM feel that the focus of these outreach efforts is too narrow and limited to personal risk-reduction without addressing the larger context and concerns of their lives (Thomas et al., 2012) and may not be equally effective at reaching all groups of MSM (Boyce et al., 2011). Relationships among MSM merit attention, since they serve as potential resources for many MSM whose sexual identity is concealed, and who face a larger social environment that condemns homosexuality. Peer social support has been identified in the psychosocial literature as an important mediator of the effects of social stigma and discrimination, which can facilitate the negotiation of safer sexual encounters, and improve HIV testing, disclosure of HIV diagnosis, and adherence to treatment (Amirkhanian, 2014; Berg, 2009; Forney & Miller, 2012; Katz et al., 2013; Kennedy et al., 2013; Latkin et al., 2012; Lauby et al., 2012; Rhodes et al., 2014; Sandfort, Knox, Collier, Lane, & Reddy, 2015; Tucker, Arandi, Bolanos, Paz-Bailey, & Barrington, 2014; Wei et al., 2014). Peer relationships can also facilitate participation in community organizations that serve MSM, which can improve social cohesion and build social capital, and ultimately enhance psychosocial well-being, HIV-related knowledge, acceptance of people living with HIV, and engagement in treatment and care (Dageid & Gronlie, 2013; Fonner et al., 2014; Liu et al., 2013; Skovdal & Daniel, 2012). This large, multi-site qualitative study examines MSM peer social relationships across diverse regions of India, providing insight into MSM's own perceptions of these social ties and their potential role in future HIV-prevention efforts.

## METHODS

The data for this investigation are drawn from formative research in preparation for a largescale trial evaluating the impact of MSM-friendly HIV services in 5 states and one Union Territory among 11,992 men (S. S. Solomon, Lucas, Celentano, Sifakis, & Mehta, 2013; S.S. Solomon et al., 2015). As part of the formative research, 31 focus group discussions (FGDs) and 121 in-depth interviews (IDIs) were conducted by trained interviewers with 363 MSM who self-identified as male from 15 sites across India in their preferred local languages (Table 1). Participants for this phase of the study were identified by local NGOs who provide services for MSM and by fellow MSM based on their knowledge about MSM in their area and/or their involvement in outreach work and peer education among MSM. Previous research indicated considerable diversity of sexual identities, and sexual behavior within sexual identity categories, with significant overlaps across groups. The literature also emphasized shared vulnerability to HIV. Since the aims of the formative research were to compile a rich array of data about the lives and vulnerabilities to HIV of MSM across diverse regions of India, FGDs and IDIs at each site aimed to include MSM with a range of sexual identities and other demographic characteristics. In order to capture as broad set of

MSM experiences as possible without any a priori assumptions, FGDs were not stratified during the formative research. MSM across FGDs and IDIs addressed a wide-range of topics related to the men's experiences of being MSM in their communities, and their knowledge of the social experiences of and the availability and accessibility of HIV-related services for MSM in their areas. FGDs and IDIs were carried out in a manner to allow participants to speak freely about topics of interest using open-ended questions whenever possible. Participants were compensated for their time.

#### Data analysis

FGDs and IDIs were transcribed and translated into English and entered into Atlas.TI qualitative software (version 7, Scientific Software Development GmbH, Eden Prarie, MN). FGD and IDI transcripts were analyzed together with a common codebook to create a rich database of themes derived from individual experiences (primarily drawn from IDIs) and social norms and reported experiences (primarily derived from FGDs) (Bernard, 2011). Transcripts were read multiple times and emergent themes were identified based on this immersive reading and developed into a preliminary codebook (Bernard, 2011; Strauss & Corbin, 1990). The emergent theme of peer relationships among MSM was investigated further through the elaboration of the codebook using transcripts from a single site (Chennai, Tamil Nadu). These codes were then refined and elaborated and applied to all remaining transcripts by two coders (CT and KR), with adjustments to accommodate any novel concepts across the sites. Any discrepancies were resolved through discussion and finalized by the lead qualitative researcher (CT). Attention was devoted to the source (FGD or IDI) and context of the coded text for each theme during the analytical process. We examined the representation of themes across sites, and characteristics of participants. Quotations were selected to represent key findings, with the state, site, age, marital status, and sexual identity noted below each quote.

## RESULTS

Participants' median age was 30 (IQR 25-35). Over 40% of MSM were ever married to a woman, with *kothi* less likely to report having ever been married (24%) than *panthi/girya* (42%) or *DD* (54%). The majority identified as a *kothi* or *DD*, followed by *panthi* or *girya* and *bisexual*, and lastly, *gay*. Participants' characteristics by state are summarized in Table 2.

#### Social Support in MSM Relationships

**Friendships and community events**—*Kothis* across research sites had close social ties and friendships with other MSM, and they frequently participated in community events, such as religious festivals, celebrations of MSM marriages (described below), dances and parties. Although many *DD*s and some *panthis* also reported having strong social connections to other MSM, they were more likely to take place with select *kothis* than in larger social groups or with others from their own identity group.

*Kothis* and *DD*s relied on these friendships for material and emotional support in the face of daily challenges. This support extended to friends diagnosed with HIV:

when we come to know if a *kothi* has *Badama* [HIV] then we feel very sympathetic towards him that he has not taken any care and we go to him and talk to him and tell him what ever has happened is the past and at least from now on he should have safe sex and take good medicines, go in for counseling [...] We support him a lot and invite them when there is any party or occasion and see that they participate... (Andhra Pradesh, Vijayawada; 27-year-old single *kothi*)

Similar exchanges were reported from multiple different research sites.

**Collaborative relationships in sex work**—MSM who engaged in formal sex work at "hot spots," primarily comprising *kothis* and *DDs*, formed collaborative relationships through sharing and referring clients to one another, and by providing protection when faced with violence or harassment from police, non-MSM, or other MSM. For instance, sex workers from multiple sites worked together to protect one another from "rowdies," groups of men who rob and commit violent acts, and often target sex workers:

[...] if you are caught by a rowdy don't get scared [...] come out and tell others, "I am *kothi*. This rowdy has come and done like this and he is trying to rob my money." When you tell [it] like that the public will deal with him. (Tamil Nadu, Chennai; 45-year-old married *DD*)

**Kinship**—Many *kothis* across multiple research sites reported that they entered into kinlike or formal kinship relations with one another, and some of these kin groups also included *DD*s. In social interactions with one another they frequently referred to treating one another "like sisters," calling one another by kinship terms for older and younger sister, and exchanging information and support in a sisterly fashion. Formal kin relations among those who entered into them resembled or could be extensions of kin ties among *hijra*:

Just like in the *Hijra* community, they develop a kind of family relations through a process called *reethulu*. They adopt MSM as daughters and daughter-in-laws, other relations like sister, mother develop through this process. (Andhra Pradesh, Visakhapatnam; 36 year-old married *DD*)

*Kothis* and *DDs* participating in these kin groups consistently reported that they relied on them for social support. These kin relationships, however, never included *panthis*.

While *panthis* sometimes were drawn to social events organized by *kothis*, many avoided lengthier social involvement with other MSM in order to protect their reputation. One *panthi*, for example, stated that he did not want to be seen with anyone who appeared feminine, and did not want to reveal his sexual attraction to men:

Because we have to see our family and I have a sister and daughter. I want to run my family in a modern way and because of this I don't want to spoil my name. It should not affect my family as I go out with my wife, daughter, sister and her daughter. (Tamil Nadu, Trichy; 32-year old married *panthi*)

Consequently, *panthis* were often only connected to *kothis* and *DD*s through brief sexual encounters, usually in the context of transactional sex. While married *kothis* and *DDs* were also concerned about keeping their sexual behavior secret from their families, many

**Romantic relationships and MSM marriage**—Romantic relationships between *kothis* and *panthis* constituted the only significant exception to the above pattern of limited interaction between *panthis* and *kothis* or *DDs*. Some MSM in such relationships had formal marriage ceremonies performed by a leader in the *kothi* or *hijra* community. Emotional intimacy and romantic love were key elements of these long-term relationships. One *kothi* participant described MSM marriage partners in these terms:

Such people should be like a female. Like a wife. He [the *panthi*] should know about his [the *kothi*'s] whereabouts. What is he doing, where is he. [...] He will be completely attached and dependent on the *kothi*. As a wife he would have given me suggestions, and helped him at times of trouble in terms of money or any other situations. They both will have very good mutual understanding. They both live for each other. (Karnataka, Mangalore; 26 year-old single *kothi*)

Kothis in such partnership took on women's traditional gender roles and provided household labor for their husbands, while *panthis* gave gifts (such as sarees, cosmetics, jewelry, and money) and attention to their *kothi* partners. In contrast to traditional gender roles, however, *kothis* in such partnerships often supported their *panthi* husbands with money that they earned in sex work. As one *panthi* reported:

They [sex workers] will charge money and have sex due to their financial crisis and some of them will have a permanent partner like a husband and they wish to give him money and so they charge. (Andhra Pradesh, Vijayawada; 36-year-old married *panthi*)

This participant's description was supported by similar statements from kothis.

#### Sources of Tension and Conflict in MSM Relationships

**Disclosure of HIV-status**—Despite supportive interactions among many *kothis* and *DDs*, sex workers were also vulnerable to unwanted disclosures of their HIV-status by fellow sex workers. The disclosure of HIV-status often resulted in the exclusion of the HIV-positive person from the community:

Respondent: A person in my group had HIV and somehow it spread throughout that area saying don't go to him he is got HIV. The customers stopped coming to him and people stopped even talking to him. He was forced to leave that locality and started living elsewhere [...]

Interviewer: Who spread the news of his disease?

Respondent: If one *kothi* comes to know about something he goes and tells it to the whole world. (Tamil Nadu, Trichy; 28-year old single *kothi*)

Participants also reported that paying *panthi* and *DD* clients and long-term romantic partners often disassociated from the HIV-infected person, and sometimes verbally or physically abused him, causing further isolation.

**Disclosure of same-sex sexual behavior**—Participants across multiple research sites reported that MSM sometimes purposefully disclosed same-sex sexual behavior to their peers' families, resulting in severe consequences. For instance, jealous or upset MSM partners could disclose their sexual partners' behavior as an act of revenge:

...there is [a] particular person in Kamareddy [city two hours North of Hyderabad]. We all were having a [social] function. Another man who had sex with this person went to his house and created problem. He told his [partner's] mother that her son slept with him and has done so many things to me, he was married, his wife and mother had come here to see him and finally left him. (Andhra Pradesh, Hyderabad; 27 year-old single *kothi*)

While the wife and husband in this case eventually reconciled, similar instances of hostile disclosure could lead to divorce and the rejection of the disclosed MSM by his family of origin.

Additionally, participants reported that some *kothis* threatened to reveal the same-sex behavior of other MSM to their families due to competition over clients between sex workers working in "hot spots" and other MSM congregated in the area:

Sometimes some *kothis* will scare the *DD* telling, "What! Shall I come near your house wearing saree? You have got married isn't it? Shut up and go." The *kothis* who are unmarried and who have feminine characteristics they will scare the *kothis* [and *DDs*] who are married like this. (Tamil Nadu, Chennai; 41 year-old married *DD*)

This threat was especially problematic for those who were living in heterosexual marriages, which was reported to be more common among *panthis* and *DDs* than *kothis*, although there were reports of married *kothis* exposed in a similar manner.

**Exploitation in romantic relationships**—While MSM married to women were at risk of disclosure of their sexual behavior by sexual partners and other MSM, participants also reported that *panthis* in long-term relationships and marriages with *kothis* sometimes used these relationships for their own personal gains. For instance, one participant explained, using the female pronoun to refer to the *kothi* partner:

All the money that she [the *kothi*] earns is given to that *panthi* [the *kothi*'s husband], but he will make use of the emotional feelings of the *kothi* and make money. This *kothi* is deeply in love with that *panthi* and is willing to sacrifice his parents, children and family only for the sake of that *panthi*. But he will come here, talk to her very sweetly and take all the money, which she [the *kothi*] has earned by sleeping with 10 others and spends it either on his wife or girlfriend. (Andhra Pradesh, Vijayawada; 26 year-old married *kothi*)

Thus, close relationships with other MSM were the basis of mutual support but also potential instruments for revenge or exploitation.

## DISCUSSION

Across research sites, we found that mutually supportive communities formed among *kothis* and some *DDs*, in the form of friendships, sex worker collaborations, and constructed kinship, which served as a buffer from societal homophobia and, in some cases, provided crucial assistance after receiving a positive HIV diagnosis. In contrast, participants reported that *panthis* and some *DDs* often only interacted with other MSM in casual transactional sexual encounters, partly due to fears of exposure of their sexual behavior to their families. Nevertheless, reports from multiple research sites indicate that *panthis* sometimes relied on clandestine long-term romantic partnerships (including formal marriages) with *kothis* for emotional and material support. At the same time, relationships among MSM also carried substantial social risks. Purposeful disclosure of HIV-status among sex workers, for instance, often resulted in exclusion from previously supportive communities. Conflict among sex workers and compromised romantic relationships sometimes led to the unwanted disclosure of same-sex sexual behavior to families, which bore severe consequences for the disclosed MSM. Finally, *panthis* in relationships with *kothis* could exploit their partners' willingness to provide emotional and material support.

These findings provide important lessons for efforts to improve HIV-related outcomes for MSM. Community-mobilization and empowerment constitute key pillars of structural approaches in HIV prevention, either as standalone interventions, or as part of combination prevention efforts (Baral et al., 2013; Beyrer et al., 2013; Coates, 2013; Strathdee, Wechsberg, Kerrigan, & Patterson, 2013). The density of supportive peer relationship among kothis and some DDs offers many innovative opportunities for community-based HIV prevention interventions. Working with senior leaders in kothi- and DD- kinship hierarchies to educate kin members on consistent condom use, regular testing, and continued engagement in treatment, and to reduce stigma for peers who are HIV, for instance, may have particularly significant impact within these networks. Successful community education and empowerment approaches developed for female sex workers in low and middle income settings that build on and strengthen peer relationships can be adapted for MSM (Beyrer et al., 2015; Kerrigan et al., 2015). In contrast, different strategies may be required to reach *panthis* and others who are only peripherally involved in these communities. Romantic partnerships, including marriages, between kothi/DD and panthi/girva may help engage these subgroups of MSM in HIV prevention, care and treatment. A recent review has identified the lack of sufficient attention to MSM in couple-based HIV interventions (Jiwatram-Negrón & El-Bassel, 2014). Following similar efforts in the U.S. (Martinez et al., 2015), couple-based interventions for MSM in India can address norms for HIV-risk reduction, sexual communication skills and support for consistent condom use, as well as HIV-service utilization within the context of local sociocultural norms and with the support of MSM-centered NGOs and outreach organizations. At the same time, the danger of disclosure of same-sex sexual behavior (especially for MSM married to women), social exclusion based on HIV-status, and exploitation (for kothis and feminine DDs) warrants that these efforts explicitly address unwanted disclosure and provide additional resources for

support in case MSM peer relationships are compromised. For instance, interventions targeting MSM involved in sex work may consider incorporating conflict-resolution modules to strengthen positive peer relationships and build more effective networks of support for HIV-positive peers in addition to other community empowerment activities. Additionally, building on similar efforts in China (Yan et al., 2014), trained MSM peer counselors can facilitate HIV-testing and provide social support, link MSM to MSM-friendly HIV-support organizations, and offer continued encouragement for engagement in care and treatment and consistent condom use. Using insights from our study, these select peers can receive specific training to activate a network of support to address the immediate and long-term consequences of unwanted disclosure of same-sex behavior or HIV-status.

#### Limitations

The participants in this study were well-connected to other MSM, which facilitated the study's objectives; however, these men may not have been able to capture the experiences of MSM who have limited peer relationships. Additionally, kothis and DDs who possessed strong social relationships were disproportionately represented among our participants, which may limit our understanding of *panthis'/giryas*' perception of their social relationships with other MSM. Our study did not stratify FGDs by sexual identity. This facilitated the discussion of potentially overlapping experiences, behaviors, and perceptions. At the same time, a stratified study may provide better insight into potential greater differences among the different sexual identities among MSM. Finally, peer relationships were an emergent theme based on formative research, rather than an a priori category. Therefore, there was variation in the richness of data produced across research site based on the participants in the discussions and interviews at each site and the amount of follow-up and probing by interviewers, which prevented systematic comparison of all aspects of peer relationships by site. Future qualitative studies may want to explore these issues in greater depth with a purposeful stratified sample that balances participants by sexual identities (using existing social networks to recruit *panthis*), and that enables in-depth, systematic comparison across regions and sites.

## CONCLUSION

This multi-site study provides unique insights into the social relationships among MSM across diverse regions of India. In the face of pervasive societal homophobia, friendship, kinship, and romantic relationships can serve as crucial sources of social support and social capital for many MSM, especially those who are particularly marginalized by their more effeminate behavior and/or appearance in mainstream society. MSM who lead secret identities and identify with more masculine gender identities, however, have limited ability to tap into these networks. Moreover, tensions among MSM, especially when confronted with an HIV diagnosis, can lead to further isolation. HIV-prevention efforts among MSM in India can build on positive peer relationships in community education and empowerment interventions among male sex worker communities and MSM kin groups, and in couple-based interventions to facilitate greater engagement in prevention, treatment and care, while also providing additional peer social support to buffer against unwanted disclosure and social exclusion.

## Acknowledgments

This research has been supported by grants from the National Institutes of Health R01MH89266 and R21MH101059, and the Johns Hopkins Center for AIDS Research P30AI094189.

## References

- Amirkhanian YA. Social networks, sexual networks and HIV risk in men who have sex with men. Curr HIV/AIDS Rep. 2014; 11(1):81–92. DOI: 10.1007/s11904-013-0194-4 [PubMed: 24384832]
- Asthana S, Oostvogels R. The social construction of male 'homosexuality' in India: implications for HIV transmission and prevention. Soc Sci Med. 2001; 52(5):707–721. Retrieved from. [PubMed: 11218175]
- Baral S, Scheibe A, Sullivan P, Trapence G, Lambert A, Bekker LG, Beyrer C. Assessing priorities for combination HIV prevention research for men who have sex with men (MSM) in Africa. AIDS and behavior. 2013; 17(Suppl 1):S60–69. DOI: 10.1007/s10461-012-0202-5 [PubMed: 22610371]
- Berg R. The effectiveness of behavioural and psychosocial HIV/STI prevention interventions for MSM in Europe: a systematic review. Euro Surveill. 2009; 14(48)
- Bernard, HR. Research methods in anthropology: Qualitative and quantitative approaches. Rowman Altamira; 2011.
- Beyrer C, Baral SD, van Griensven F, Goodreau SM, Chariyalertsak S, Wirtz AL, Brookmeyer R. Global epidemiology of HIV infection in men who have sex with men. The Lancet. 2012; 380(9839):367–377.
- Beyrer C, Crago AL, Bekker LG, Butler J, Shannon K, Kerrigan D, ... Wirtz AL. An action agenda for HIV and sex workers. The Lancet. 2015; 385(9964):287–301.
- Beyrer C, Sullivan P, Sanchez J, Baral SD, Collins C, Wirtz AL, ... Mayer K. The increase in global HIV epidemics in MSM. AIDS. 2013; 27(17):2665–2678. DOI: 10.1097/01.aids. 0000432449.30239.fe [PubMed: 23842129]
- Boyce, P.; Chakrapani, V.; Dhanikachalam, D. Hard-to-reach men who have sex with men in India, recommendations for HIV prevention. 2011. Retrieved from http://strive.lshtm.ac.uk/resources/ india-%E2%80%98msm-situation-paper%E2%80%99-series-technical-briefs
- Chakrapani, V.; Boyce, P.; Dhanikachalam, D. Women Partners of Men who have Sex with Men in India. 2011. Retrieved from http://strive.lshtm.ac.uk/resources/india-%E2%80%98msm-situationpaper%E2%80%99-series-technical-briefs
- Chakrapani V, Newman PA, Shunmugam M. Secondary HIV prevention among kothi-identified MSM in Chennai, India. Culture, health & sexuality. 2008; 10(4):313–327.
- Chakrapani V, Newman PA, Shunmugam M, Dubrow R. Barriers to free antiretroviral treatment access among kothi-identified men who have sex with men and aravanis (transgender women) in Chennai, India. AIDS care. 2011; 23(12):1687–1694. [PubMed: 22117127]
- Coates TJ. An expanded behavioral paradigm for prevention and treatment of HIV-1 infection. Journal of Acquired Immune Deficiency Syndromes. 2013; 63(Suppl 2):S179–182. DOI: 10.1097/QAI. 0b013e318299eff0 [PubMed: 23764633]
- Dageid W, Gronlie AA. The associations between resilience, social capital and self-rated health among HIV-positive South Africans. Journal of health psychology. 2013; doi: 10.1177/1359105313513623
- Fonner VA, Kerrigan D, Mnisi Z, Ketende S, Kennedy CE, Baral S. Social cohesion, social participation, and HIV related risk among female sex workers in Swaziland. PloS one. 2014; 9(1):e87527.doi: 10.1371/journal.pone.0087527 [PubMed: 24498125]
- Forney JC, Miller RL. Risk and protective factors related to HIV-risk behavior: a comparison between HIV-positive and HIV-negative young men who have sex with men. AIDS care. 2012; 24(5):544–552. DOI: 10.1080/09540121.2011.630341 [PubMed: 22292776]
- Jha UM, Raj Y, Venkatesh S, Dhingra N, Paranjpe RS, Saggurti N. HIV epidemic among men who have sex with men in India: national scenario of an unfinished agenda. HIV/AIDS (Auckland, NZ). 2014; 6:159.

- Jiwatram-Negrón T, El-Bassel N. Systematic review of couple-based HIV intervention and prevention studies: advantages, gaps, and future directions. AIDS and behavior. 2014; 18(10):1864–1887. [PubMed: 24980246]
- Katz IT, Ryu AE, Onuegbu AG, Psaros C, Weiser SD, Bangsberg DR, Tsai AC. Impact of HIV-related stigma on treatment adherence: systematic review and meta-synthesis. Journal of the International AIDS Society. 2013; 16(3 Suppl 2):18640.doi: 10.7448/IAS.16.3.18640 [PubMed: 24242258]
- Kennedy CE, Baral SD, Fielding-Miller R, Adams D, Dludlu P, Sithole B, ... Kerrigan D. "They are human beings, they are Swazi": intersecting stigmas and the positive health, dignity and prevention needs of HIV-positive men who have sex with men in Swaziland. J Int AIDS Soc. 2013; 16(Suppl 3):18749. [PubMed: 24321112]
- Kerrigan D, Kennedy CE, Morgan-Thomas R, Reza-Paul S, Mwangi P, Win KT, ... Butler J. A community empowerment approach to the HIV response among sex workers: effectiveness, challenges, and considerations for implementation and scale-up. The Lancet. 2015; 385(9963): 172–185.
- Khan S. Culture, sexualities, and identities: men who have sex with men in India. Journal of homosexuality. 2001; 40(3–4):99–115. DOI: 10.1300/J082v40n03\_06 [PubMed: 11386341]
- Kumta S, Lurie M, Weitzen S, Jerajani H, Gogate A, Row-kavi A, ... Mayer KH. Bisexuality, sexual risk taking, and HIV prevalence among men who have sex with men accessing voluntary counseling and testing services in Mumbai, India. Journal of acquired immune deficiency syndromes (1999). 2010; 53(2):227. [PubMed: 19934765]
- Latkin C, Yang C, Tobin K, Roebuck G, Spikes P, Patterson J. Social network predictors of disclosure of MSM behavior and HIV-positive serostatus among African American MSM in Baltimore, Maryland. AIDS and behavior. 2012; 16(3):535–542. DOI: 10.1007/s10461-011-0014-z [PubMed: 21811844]
- Lauby JL, Marks G, Bingham T, Liu KL, Liau A, Stueve A, Millett GA. Having supportive social relationships is associated with reduced risk of unrecognized HIV infection among black and Latino men who have sex with men. AIDS and behavior. 2012; 16(3):508–515. DOI: 10.1007/ s10461-011-0002-3 [PubMed: 21805191]
- Liu L, Pang R, Sun W, Wu M, Qu P, Lu C, Wang L. Functional social support, psychological capital, and depressive and anxiety symptoms among people living with HIV/AIDS employed full-time. BMC psychiatry. 2013; 13:324.doi: 10.1186/1471-244X-13-324 [PubMed: 24289721]
- Logie CH, Newman PA, Chakrapani V, Shunmugam M. Adapting the minority stress model: associations between gender non-conformity stigma, HIV-related stigma and depression among men who have sex with men in South India. Social Science & Medicine. 2012; 74(8):1261–1268. [PubMed: 22401646]
- Martinez O, Wu E, Frasca T, Shultz AZ, Fernandez MI, Lopez Rios J, Sandfort TG. Adaptation of a Couple-Based HIV/STI Prevention Intervention for Latino Men Who Have Sex With Men in New York City. American journal of men's health. 2015; doi: 10.1177/1557988315579195
- Mimiaga MJ, Closson EF, Thomas B, Mayer KH, Betancourt T, Menon S, Safren SA. Garnering an indepth understanding of men who have sex with men in Chennai, India: a qualitative analysis of sexual minority status and psychological distress. Archives of Sexual Behavior. 2014; Epub ahead of print. doi: 10.1007/s10508-014-0369-0
- Narayanan P, Das A, Prabhakar P, Gurung A, Morineau G, Rao G, Risbud A. Self-Identity, Sexual Practices and Sexually Transmitted Infections among High-Risk Men who Have Sex with Men Attending Clinics in Urban India. J AIDS Clinic Res S. 2012:S1.
- National Institute of Medical Statistics and National AIDS Control Organisation. Technical Report: India HIV Estimates. 2012. Retrieved from http://www.unaids.org/en/media/unaids/contentassets/ documents/data-and-analysis/tools/spectrum/India2012report.pdf
- Patel VV, Mayer KH, Makado HJ. Men who have sex with men in India: a diverse population in need of medical attention. Indian Journal of Medical Research. 2012; 136(4):563–570. [PubMed: 23168696]
- Phillips A, Boily M, Lowndes C, Garnett G, Gurav K, Ramesh B, ... Alary M. Sexual identity and its contribution to MSM risk behavior in Bangaluru (Bangalore), India: the results of a two-stage cluster sampling survey. Journal of LGBT Health Research. 2009; 4(2–3):111–126. [PubMed: 19856744]

- Phillips AE, Lowndes CM, Boily MC, Garnett GP, Gurav K, Ramesh B, ... Alary M. Men who have sex with men and women in Bangalore, South India, and potential impact on the HIV epidemic. Sexually transmitted infections. 2010; 86(3):187–192. [PubMed: 20522632]
- Reddy G. Geographies of contagion: Hijras, Kothis, and the politics of sexual marginality in Hyderabad. Anthropology & Medicine. 2005; 12(3):255–270. [PubMed: 26873670]
- Rhodes SD, Alonzo J, Mann L, Downs M, Andrade M, Wilks C, Bachmann LH. The ecology of sexual health of sexual minorities in Guatemala City. Health Promot Int. 2014; Epub ahead of print. doi: 10.1093/heapro/dau013
- Saggurti N, Mishra RM, Proddutoor L, Tucker S, Kovvali D, Parimi P, Wheeler T. Community collectivization and its association with consistent condom use and STI treatment-seeking behaviors among female sex workers and high-risk men who have sex with men/transgenders in Andhra Pradesh, India. AIDS care. 2013; 25(Suppl 1):S55–66. DOI: 10.1080/09540121.2012.749334 [PubMed: 23745631]
- Sandfort TG, Knox J, Collier KL, Lane T, Reddy V. HIV testing practices of South African township MSM in the era of expanded access to ART. AIDS and behavior. 2015; 19(3):561–574. DOI: 10.1007/s10461-014-0843-7 [PubMed: 25103866]
- Setia MS, Brassard P, Jerajani HR, Bharat S, Gogate A, Kumta S, ... Boivin JF. Men who have sex with men in india: a systematic review of the literature. Journal of LGBT Health Research. 2008; 4(2–3):51–70. DOI: 10.1080/15574090902913727 [PubMed: 19856739]
- 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. Psychology, Health & Medicine. 2011; 16(4):450–462. DOI: 10.1080/13548506.2011.554645
- Skovdal M, Daniel M. Resilience through participation and coping-enabling social environments: the case of HIV-affected children in sub-Saharan Africa. African journal of AIDS research : AJAR. 2012; 11(3):153–164. DOI: 10.2989/16085906.2012.734975 [PubMed: 24482634]
- Solomon SS, Lucas GM, Celentano DD, Sifakis F, Mehta SH. Beyond surveillance: a role for respondent-driven sampling in implementation science. American Journal of Epidemiology. 2013; 178(2):260–267. DOI: 10.1093/aje/kws432 [PubMed: 23801014]
- Solomon SS, Mehta SH, Latimore A, Srikrishnan AK, Celentano DD. The impact of HIV and highrisk behaviours on the wives of married men who have sex with men and injection drug users: implications for HIV prevention. Journal of the International AIDS Society. 2010; 13(Suppl 2):S7. [PubMed: 20573289]
- Solomon SS, Mehta SH, Srikrishnan AK, Vasudevan CK, Mcfall AM, Balakrishnan P, ... Laeyendecker O. High HIV prevalence and incidence among MSM across 12 cities in India. AIDS. 2015; 29(6):723–731. [PubMed: 25849835]
- Strathdee SA, Wechsberg WM, Kerrigan DL, Patterson TL. HIV prevention among women in low-and middle-income countries: intervening upon contexts of heightened HIV risk. Annual review of public health. 2013; (34)
- Strauss, A.; Corbin, J. Basics of qualitative research. Newbury Park, CA: Sage; 1990.
- Thomas, Mimiaga MJ, Mayer KH, Closson EF, Johnson CV, Menon S, ... Safren SA. Ensuring it works: a community-based approach to HIV prevention intervention development for men who have sex with men in Chennai, India. AIDS education and prevention : official publication of the International Society for AIDS Education. 2012; 24(6):483–499. DOI: 10.1521/aeap. 2012.24.6.483 [PubMed: 23206199]
- Thomas B, Mimiaga MJ, Kumar S, Swaminathan S, Safren SA, Mayer KH. HIV in Indian MSM: reasons for a concentrated epidemic & strategies for prevention. Indian Journal of Medical Research. 2011; 134(6):920–929. DOI: 10.4103/0971-5916.92637 [PubMed: 22310824]
- Thomas B, Mimiaga MJ, Mayer KH, Perry NS, Swaminathan S, Safren SA. The influence of stigma on HIV risk behavior among men who have sex with men in Chennai, India. AIDS care. 2012; 24(11):1401–1406. DOI: 10.1080/09540121.2012.672717 [PubMed: 22519945]
- Thomas B, Mimiaga MJ, Menon S, Chandrasekaran V, Murugesan P, Swaminathan S, ... Safren SA. Unseen and unheard: predictors of sexual risk behavior and HIV infection among men who have

sex with men in Chennai, India. AIDS Education and Prevention. 2009; 21(4):372–383. DOI: 10.1521/aeap.2009.21.4.372 [PubMed: 19670971]

- Tomori C, McFall AM, Srikrishnan AK, Mehta SH, Solomon SS, Anand S, Celentano DD. Diverse Rates of Depression Among Men Who Have Sex with Men (MSM) Across India: Insights from a Multi-site Mixed Method Study. AIDS and behavior. 2015; doi: 10.1007/s10461-015-1201-0
- Tucker C, Arandi CG, Bolanos JH, Paz-Bailey G, Barrington C. Understanding social and sexual networks of sexual minority men and transgender women in Guatemala city to improve HIV prevention efforts. J Health Care Poor Underserved. 2014; 25(4):1698–1717. DOI: 10.1353/hpu. 2014.0163 [PubMed: 25418236]

Verma RK, Collumbien M. Homosexual activity among rural Indian men: implications for HIV interventions. AIDS. 2004; 18(13):1845–1847. Retrieved from http://graphics.tx.ovid.com/ ovftpdfs/FPDDNCIBFCECK000/fs047/ovft/live/ gv024/00002030/00002030-200409030-00014.pdf. [PubMed: 15316346]

- Wei C, Yan H, Yang C, Raymond HF, Li J, Yang H, ... Stall R. Accessing HIV testing and treatment among men who have sex with men in China: a qualitative study. AIDS care. 2014; 26(3):372– 378. DOI: 10.1080/09540121.2013.824538 [PubMed: 23909807]
- Woodford MR, Newman PA, Chakrapani V, Shunmugam M, Kakinami L. Correlates of HIV testing uptake among kothi-identified men who have sex with men in public sex environments in Chennai, India. AIDS and behavior. 2012; 16(1):53–62. [PubMed: 21630011]
- Yan H, Zhang R, Wei C, Li J, Xu J, Yang H, McFarland W. A peer-led, community-based rapid HIV testing intervention among untested men who have sex with men in China: an operational model for expansion of HIV testing and linkage to care. Sexually transmitted infections. 2014; 90(5): 388–393. [PubMed: 24926040]

## Table 1

Distribution of participants in in-depth interviews and focus group discussions by state/union territory (n=363).

State/Union Territory	Number of IDI Participants	Number of FGDs	Number of FGD Participants	Total Number of Participants
Madhya Pradesh	8	2	16	24
Uttar Pradesh	8	2	15	23
Delhi	8	2	12	20
Andhra Pradesh	32	8	64	96
Karnataka	33	9	74	107
Tamil Nadu	32	8	61	93
Total (%)	121 (33.3)	31	242 (66.6)	363

Table 2

Summary of participant characteristics by state/union territory

State/Union Territory	Mar	<b>Marital Status</b>		Sexu	Sexual Identity		
	Single	Ever Married	Kothi	Panthi/Girya	aa	Bisexual	Gay
Madhya Pradesh	15	6	4	9	3	2	6
Uttar Pradesh	18	5	6	3	8	3	0
Delhi	12	8	8	9	5	1	0
Andhra Pradesh	55	41	46	61	26	5	0
Karnataka	62	45	41	9	35	23	2
Tamil Nadu	52	41	40	15	37	0	1
Total (%)	214 (59)	149 (41)	148 (40.8)	55 (15.2)	114 (31.4)	34 (9.4)	12 (3.3)