Review Article

What Do We Know About LGBTQIA+ Mental Health in India? A Review of Research From 2009 to 2019

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Abstract

Background: The period from 2009 to 2019 has seen a lot of conversation about issues of LGBTQIA+ (lesbian, gay, bisexual, transgender, queer/ questioning, intersex, asexual, and others) individuals in India, but they continue to be a group showing poor health equity.

Objective: This descriptive content review attempted to explore 5 questions: what is the nature of existing research on mental health of LGBTQIA+ individuals, what are the pathways that contribute to mental health issues, whether the existing health facilities mitigate or facilitate these pathways, what are the interventions proposed for this group, and what are the gaps in research that can be addressed in the next decade.

Method: "Mental health aspects" were described as variables relevant to understanding individuals' cognitions, emotions, and behavior. We searched for literature in online journal databases, in archives of the most prominent journals, on websites of prominent LGBTQIA+ organizations, and through cross-referencing of papers obtained. The data were abstracted and coded into themes and subthemes. We found 22 reviews and reports, 4 viewpoints and comments, 7 editorials, 1 conference proceeding, and 60 original articles.

Conclusions: Prevalence studies reveal that LGBTQIA+ individuals were found to show high rates of mental health concerns, and that the adapted minority stress model may be a crucial pathway for the same. Lived experiences, factors related to mental well-being, and societal attitudes have also been studied. Intervention studies are relatively fewer, and certain subgroups of LGBTQIA+ identities are less represented in research. Gaps in research were identified and recommendations for research in the coming decade were proposed.

Keywords

LGBTQIA+, gender and sexual minorities, health inequities, research gaps

Introduction

The previous decade has been crucial for the LGBTQIA+ (lesbian, gay, bisexual, transgender, queer/ questioning, intersex, asexual, and others) community in India. Since 2009, following the Delhi High Court's initial verdict and the Supreme Court's final verdict in 2018 with respect to section 377 of the Constitution, as well as the national legal services authority (NALSA) judgment and debate with respect to the Trans Rights Bill, the legal discourse is being accompanied by much more societal conversation about the LGBTQIA+ community. Justice Chandrachud in the verdict about section 377 outlined the role of mental health professionals to provide responsible mental health care and advocacy.[1]

There is no systematic data about the number of LGBTQIA+ individuals in India. According to an estimate by Gates, Williams Institutes estimates, LGBTQIA+ individuals are likely to form 3.8% of the population, ie, 45.4 million in 2011.[2] There is much that we still need to know about this population.

Addressing health inequities by 2030 is one of the United Nations' Sustainable Development Goals, and in a crucial consultation on public health, the LGBTQIA+ community was identified as one of the 12 groups least represented in

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health equity research in India.[3] A large research gap was found amongst important issues related to health equity, and the consultative body called for research along 4 lines as priority in the next decade: descriptive research outlining the health situation of this (and other identified) group(s), explanatory research to identify pathways that lead to creating these health inequities, explanatory research examining how health systems facilitate or mitigate these pathways, and intervention research that provides guidelines for how one can address these inequities.

Before we can begin systematically contributing research work within this useful framework, it is important to understand where we are currently at with respect to research findings. In this review, we seek to outline current research findings with respect to the mental health of the LGBTQIA+ community in India. We have specifically focused on the period between 2009 and 2019. This is a baseline that we can potentially build on as researchers in the next decade.

Methodology

Questions and Definitions

This is a descriptive content review of studies exploring mental health aspects of LGBTQIA+ individuals in India. In keeping with the framework outlined above,[3] we were interested in the following key questions:

1. What are the key findings from research conducted about mental health aspects of LGBTQIA+ individuals?
   - What kind of variables have been explored?
   - What do we know about lived experiences of LGBTQIA+ individuals?
   - Who are the individuals who have been studied?
2. What do we know about potential pathways that may exacerbate mental health concerns in this group?
3. What do we know about the role of existing mental health systems in working with this group in facilitating or mitigating these pathways?
4. What do we know about interventions that might be useful with this group?
5. What data are we missing that needs to be explored further?

We define "mental health aspects" here in broad terms as variables relevant to understanding individuals' cognitions, emotions, and behavior; we include here "mental illnesses" or "health concerns," and also satisfaction, self-esteem, other indices of well-being, and lived experiences. We also include mental health interventions and stigma and societal attitudes. By LGBTQIA+ individuals we mean gender and sexual minorities, ie, all gender and sexual identities other than cis-gender heterosexual.

Study Identification

We performed a literature search using 4 modalities. We searched databases such as ProQuest, Google Scholar, PubMed, SagePub, ResearchGate, and Academia, using key terms such as gay, lesbian, bisexual, transgender, LGBT, sexual orientation, sexual minorities, gender minorities, homosexual, queer, asexual, genderqueer, intersex, MSM, *hijra* and mental health, mental illness, psychology, psychiatry, or psychosocial and India as search terms. We also searched archives of prominent Indian journals on psychology, psychiatry, public health, sexual health, and queer studies. We reviewed the research publications listed on websites and databases of prominent organizations and bodies that work for the rights of LGBTQIA+ individuals (Humsafar Trust, CREA, LABIA, etc.), as they are key contributors to research with this population. This was followed by cross-referencing with all the studies yielded in the first phase.

We were interested in studies that discussed mental health aspects of LGBTQIA+ individuals in India. Dates of interest ranged from 2009 (after the Delhi High Court first made a key verdict about section 377) to 2019. We included original studies, reviews, editorials, and comments published in Indian peer reviewed journals, or about LGBTQIA+ individuals in India published in international journals, and also books and published reports that described original research based in India. We included papers that were specifically about the LGBTQIA+ community, and also more general papers that included descriptions of mental health issues of LGBTQIA+ individuals amongst those of other groups. We also included psychological studies that focused on attitudes toward LGBTQIA+ individuals held in the society. We included interdisciplinary research, primarily public health, sexual and reproductive health, and sociology research, as long as it specifically addressed psychological variables; at the same time, we included research on health, cultural, and historical factors that was published in psychiatry and psychology journals. We did not screen based on research quality or place restrictions on the journal prominence, as we wished to include all possible relevant research throughout the country, and our basic criteria were that it had to be peer reviewed.

Data Processing

After identification of the studies, we abstracted the data on a standardized data sheet. We recorded author names, journal/book/report names, titles, dates of publication, types of paper, nature and size of the sample and population studied, region of the study, study design, major findings, and major themes. We coded this data based on the type of paper (review, editorial, comment, original study, book chapter, book, and report), on the basis of the populations studied (LGBTQIA+, men having sex with men [MSM], gender minorities, only

homosexual, lesbian, gay and bisexual [LGB], families, and society), on the region in which the study was conducted, and on the major research themes that we identified (prevalence of mental health conditions, risk and protective factors, studies exploring the link between mental health and LGBTQIA+ identity, lived experiences, mental well-being variables, interventions, and societal attitudes). The themes were then divided into subthemes based on the analysis of commonalities and differences in the subject matter studied.

Results

We found 22 reviews and reports, 4 viewpoints and comments, 7 editorials, 1 conference proceeding, and 60 original articles.

Reviews and Editorials

In the decade since 2009, many reviews and editorials have been published in psychology and psychiatry journals that addressed LGBTQIA+ related themes. In one paper, the authors reviewed papers published about the issue before and after the 2009 verdict and noted how the discourse of the psychiatrists took a U-turn with some articles published in support of homosexuality, as compared to previous articles that pathologized LGBTQIA+ identities.[4] The reviews, editorials, comments, and viewpoints[2,4-30] have traced historical, anthropological, cultural, medical, legal, and social perspectives toward sexuality through the ages, have highlighted various facets of the societal challenges and health care needs faced by LGBTQIA+ individuals in India, and have called for the mental health fraternity to be more sensitive of their needs. There have also been articles on larger themes that were inclusive of the concerns of LGBTQIA+ individuals in these contexts, for instance, women's mental health,[31] the elderly,[32] and sex and gender-related issues in child psychiatric practice.[33]

Prevalence of Mental Health Conditions

A few studies over this decade have presented estimates of the prevalence of various mental health conditions amongst LGBTQIA+ individuals. In one study,[34] 52.9% of MSMs studied were found to have some psychiatric morbidity. A qualitative study with sexual minority women found that isolation, anxiety, high substance use, and suicidal thoughts were common themes in these women's experiences.[35] Prevalence rates for depression, substance abuse and dependence, anxiety, and other psychiatric conditions from varied studies[36-49] are described in Table 1. Badgett[25] stated that in the absence of studies providing a comparable estimate for non-LGBTQIA+ people in India, the population prevalence of a condition can be used as a benchmark. Although the varied prevalence rates and methodologies make comparisons difficult, prima facie depression and suicide rates in LGBTQIA+ individuals are higher than population estimates that are 4.5% 12-month population estimate for India and 2.1% 12-month population estimate for developing countries, respectively.[25]

Access to Mental Health Care

In spite of the high prevalence rates, not a single MSM individual with mental health issues was reported to be engaging in any current treatment.[41] Some transgender individuals reported that they avoid free government health care services and prefer self-medication or private health care.[50] Sexual minority women reported that they typically avoid mental health services because of the stigma of mental illness, fear of negative medical interventions, and previous unfavorable experiences of these services.[35] As reported in some reviews,[4,7-8,10,13-15] the extent of marginalization, inadequate knowledge and sensitivity of health care professionals toward LGBTQIA+ individuals, active discrimination, and perpetuation of violence by them may be the contributing health care barriers.

Risk and Protective Factors for Mental Health Conditions

While some studies showed that depression symptoms were negatively correlated with age,[36] others suggested higher rates for depression for older individuals.[41-42] Financial debt was a predictor of depression in one study.[38] The rates of depression were higher for those who had faced negative reactions when coming out.[36] The reports were inconsistent about the relation between depression and whether one was out, and depression and whether one had been or was married.[42,48]

Much of the research on LGBTQIA+ individuals has emerged out of public health research related to HIV. Depression, substance abuse, and victimization among MSM and transgender individuals were found to have a synergistic effect on sexual risk.[44] Major depression was found to be a significant predictor for engaging in unsafe sexual practices.[40] At the same time, the risk of depression was higher for those engaged in sex work outside their place of residence, those engaged in transactional sex, those engaged in unprotected sexual practices, those who had sexually transmitted infections, those who were aware that they were HIV positive, those who had disclosed that to others, those who had a high perception of their own risk for HIV, and those reporting forced sexual experiences or intimate partner violence.[38,42,44,48]

The rates of depression were related to rates of substance use.[38,42,44] One study reported higher risk for substance use amongst those who were out, and also those who had more sexual partners, or had experiences of intimate partner violence.[46]

Social support satisfaction was associated with lower risk of anxiety, depression, and suicidal ideation.[41] Higher self-esteem was associated with lower risk for depression and suicide.[41] Resilient coping and social support have shown varied protective benefits for MSM and transwomen.[42]

Table 1. Prevalence of Mental Health Conditions Among LGBTQIA+ Individuals

Study Sample	Rates of Mental Health Conditions
277 MSM pan India[36]	58.84% depression
20 transwomen and 10 transmen Imphal[37]	62.5% alcohol abuse, 31.2% alcohol dependence, 46.8% drug abuse, 37.55% generalized anxiety disorder (GAD), 31.2% depression, 41.2% current suicidal risk, 31.2% past suicidal attempts, 18.7% dysthymia, 6.2% panic disorder, 9.4% agoraphobia, 25% social phobia, and 9.4% post-traumatic stress disorder (PTSD)
1176 MSM Andhra Pradesh[38]	35% depression
100 Chennai and 100 Kumbakonam (semi urban area in Tamil Nadu)[39]	Depression (severe, moderate, and mild): 79% (30%, 25%, and 24%) and 77% (47%, 19%, and 11%), and 33% of depressed people showed suicidal ideation
150 MSM Mumbai[40]	28.7% depression, 16.7% alcohol dependence/abuse, 14% social anxiety or PTSD, 13.3% GAD or obsessive-compulsive disorder, and 45% suicidal ideation
150 MSM Mumbai[41]	29% depression, 24% anxiety disorders, 9.5% current/prior hypomania, 5.4% current mood disorder with psychosis, 7.4% and 5.4% prior and current psychotic episode, 3.4% prior manic episode, 2.7% dysthymia, 15% alcohol dependence, and 45% suicidal (66% low, 19% moderate, and 15% high risk)
11,992 MSM in 12 cities pan India[42]	11% depression (7.7% severe, 2.2% moderate, and 1.4% mild)
276 gay and 116 bisexual men Maharashtra[43]	59.1% and 50.9% depression rates in GB men, respectively
300 MSM and 300 transwomen in Tamil Nadu, Maharashtra, West Bengal, and Delhi[44]	Among MSM: 35.3% moderate/severe depression and 15% frequent alcohol use. Among transwomen: 42.7% moderate/severe depression and 37.3% frequent alcohol use.
12 lesbian and 20 gay Imphal[45]	25% current depression, 18.7% past history of depression, 6.2% dysthymia, suicidal risk (9.4% low, 9.4% moderate, and 6.2% high), 15.6% past suicidal attempts, 9.3% hypomanic episode, 18.7% anxiety disorders, 62.5% alcohol abuse and 31.25% dependence, and 46.8% drug abuse
433 MSM Maharashtra[46]	Substance use: 23% hazardous drinking, 12% illicit substances, 9% polysubstance, and 58% depression
3880 MSM Tamil Nadu, Maharashtra, and Andhra Pradesh[47]	60% any alcohol use and 40% of these are frequent users
210 MSM Chennai[48]	54.8% depression
33 LGBTI Vadodara[49]	70% depression, 15% suicidal ideation, and 45% alcohol/tobacco use

Relation Between Stigma and Mental Health Conditions

1. LGBTQIA+ Individuals Experience Stigma
2. Stigma Is Related to Mental Health Conditions
3. Some Factors May Protect LGBTQIA+ Individuals From Stigma and Mental Health Conditions

1. **LGBTQIA+ Individuals Experience Stigma**

Interviews and focus group discussions with LGBTQIA+ individuals across the country have revealed that LGBTQIA+ individuals experience actual, felt, and internalized stigma. They experience family enacted violence and lack of family acceptance, pressure to marry, violence from peers and partners, institutional violence and discrimination at schools and workplaces, and experiences of discrimination in employment, housing, and health care services.[42,50-52] In one study, third-fourths of respondents felt it was imperative to keep their identity a secret.[53]

There are different aspects of one's identities that may be stigmatized. Participants in studies have described the influence of heteronormativity. Alternatives to heterosexuality were limited for many participants: most described growing up assuming that being attracted to a different sex had to be a part of their sexuality. With the aforementioned assumption of heterosexuality, most participants negotiated the expectation (from themselves, their families, and others) that they would marry a different gender and have children.[54] Sexual minority stigma is paramount: one's sexual identity as homosexual is strongly stigmatized. Bisexual individuals additionally reported experiences of bi-negativity.[35,54]

There is stigma related to gender nonconformity.[39] Participants reported gender-specific stigma and behavioral norms, for instance, stigma related to gender expression influenced behaviors which were socially permitted. This takes varied forms, with cis-women experiencing violence because of patriarchal beliefs related to their supposed inferiority as compared to cis-men.[35] Transgender individuals experience transnegativity.[50] Gay men not conforming to "masculine" presentation norms also face additional stigma. For instance, amongst MSM, those identifying as a *kothi* (feminine acting/appearing and predominantly receptive in anal sex) face higher stigma compared to a *panthi* (masculine appearing, predominantly insertive).[42,55]

Individuals from the LGBTQIA+ community often report additional forms of stigma, such as stigma about being HIV positive,[39] stigma related to engaging in sex work,[52] and stigma related to having mental health issues.[35]

2. **Stigma Is Related to Mental Health Conditions**

Some researchers evaluated the concept of ego dystonic homosexuality, that is an often used diagnosis.[56] Both quantitative and qualitative analyses revealed external attributions for discomfort, calling into question this diagnosis and suggesting that the discomfort that homosexual individuals may have related to their sexuality is largely because of societal factors that are related to stigma and discrimination.[56] Meyer in 1997 propounded the minority stress theory which states that sexual minorities experience internalized homophobia, felt stigma, and actual stigma which contribute to higher stress that increase vulnerability to mental health conditions.[57] Participants reported experiences that suggested that stigma and resultant violence and discrimination may contribute to low self-esteem, depression, suicidal ideation, low self-efficacy to challenge abuse, and higher vulnerability to HIV.[50,52,53,58-59] Chakrapani et al,[60] found that victimization and violence contribute to internalized homonegativity and/or depression, which contribute to alcohol use, and these are sequentially or concurrently associated with higher HIV risk.

Researchers studied the cross-cultural applicability of the minority stress model and proposed the adapted minority stress model.[39] This states that sexual minority stigma, gender nonconformity stigma, and stigma about being HIV positive together contribute to depression, while coping and social support are mediators. Results found support for it among MSM.[39]

3. **Some Factors May Protect LGBTQIA+ Individuals From Stigma and Mental Health Conditions**

In keeping with the minority stress theory, researchers have obtained quantitative data suggesting that resilient coping and social support are negatively correlated with depression and with stigma, and are mediating factors in the relationship between stigma and depression.[39,59] Social support can take the form of peer support,[50,60] family acceptance (which is associated with less self-stigma and more confidence handling public stigma),[58,60] the presence of supportive partners,[54,60] and offline and online support from LGBTQIA+ communities.[35,58-59] Resilient coping has also been linked to agency[50] and self-acceptance,[53] in qualitative reports.

Lived Experiences

Identity Formation

Many individuals do not subscribe to Western labels and have local terms that they use to describe themselves. Steif[61] described these local identities of *kothi*, *panthi*, and *hijra* in terms of individuals' sexual behaviors, practices, and gender presentation, and other terms include double decker. Labels were perceived as being necessary to communicate their identity in their social network and also as a political statement for LB women.[35] The internet and LGBTQIA+ spaces were instrumental in helping them explore their identities. In a study with MSM in India,[62] they described the formation of their sexual identity in childhood and subsequent attempts to negotiate these. In a study with 50 persons assigned gender female at birth, the concept of gender as an evolving process that was both fluid and constructed was described in relation to the process of identity formation.[63] One study explored the various forces shaping identities of GLB individuals across the lifespan.[64] In childhood, individuals reported expression of gender nonconformity and its correction by self, parents, school, medical professionals, and the emergence of their sexuality that brought forth unique developmental challenges such as isolation, confusion and questions about sexuality, invisibility with respect to absence of language and images of sexual diversity, denial, fear, and internalized homophobia, working out causations, and working through popular misconceptions.

Disclosure and Coming Out

Some studies explored how many LGBTQIA+ individuals were out and their experiences after this disclosure.[37,65-66] The average age of coming out of the closet for MSM was reported to be 19.71 years.[36,65] In one study, 47% reported mixed coming out experiences and 38% reported positive ones.[65] Two studies noted that bisexually identified men were less likely to be out as compared to gay men, and many of them passed as heterosexual.[43,66]

The most common reasons for coming out were found to be avoiding marriage pressure from family, desire to gain mental peace, and among bisexual respondents, sexual adventure with another partner of the same sex.[66] The most common practice with respect to coming out was disclosing to some female family members. The most popular reasons for not coming out were maintaining mental peace and social security, lack of financial stability, or because family members would not understand; some bisexual respondents did not prefer to come out because they believed themselves to be casually exploring the other side of sexuality.[66]

Intimate Partner Relationships

Intimate partner relationships were reported to be important for the consolidation of identity of LGB individuals, and same sex relationships were found to provide mirroring and self-affirmation.[64] Challenges in these relationships include negotiation of their relationships in a heterosexual society, need for secrecy, the continuum of loneliness, isolation, breakups, depression and self-harm, experiences with nonmonogamy, complexity of gender equations, exploring relationships with their bodies and sexual pleasure, and some experiences of intimate partner violence; difficulties were reportedly compounded for "masculine" persons assigned

female at birth.[63-64] Sexual minority women revealed that the stigma of female same-sex relationships influenced conceptions of intimacy, and the lack of private spaces to be together inhibited intimacy and affection.[54]

10% bisexual respondents and near about 15% gay respondents reported enjoying multiple sexual relationships.[66] 40% gay and bisexual (GB) men reported satisfaction with their current intimate partner relationships.[65] The average duration of relationships was less than 6 months to a year for gay men, less than 6 months for most bisexual respondents, and more than 30 months for lesbian respondents.[66] A study found that more gay than bisexual or heterosexual individuals admitted to internet cheating, with more men than women reporting the same; social isolation, psychological distress, and external influence were reported to be the underlying reasons.[67]

For many LGB individuals, heterosexual marriages were seen as compulsory, and living within and outside this heterosexual script was seen as a significant challenge.[54,64-65,67] Numbers of LGB individuals in heterosexual marriages ranged from 20% to 75% and were higher for bisexual individuals.[65-67]

One study compared sexual experiences of MSM who were in heterosexual marriages and those who were not.[68] Participants across all sexual identities described sexual desire and affection for their female sex partners. A number of participants said that they preferred women but had sex with men when women were not available; married men had relationships outside marriage mostly with men and rarely with other women.

Social Support, Acceptance Versus Isolation

In one study,[66] 23% lesbian respondents, 47% gay respondents, and 11% bisexual respondents have experienced some degree of support from their surroundings, and around 20% lesbian respondents, around 20% gay respondents, and 2% bisexual respondents were not accepted by anybody.

Family acceptance emerged as an important factor in interviews with many LGBTQIA+ individuals. Studies described varying levels of family acceptance and its impact for LGBTQIA+ individuals.[66,69] A number of lesbians, bisexual women, and trans individuals pan India reported that their experiences with family were full of violence, sexual abuse, neglect, discrimination, and that the extended family also exerted control and was complicit in policing them.[63] Some transgender individuals reported that their identities were seen as obstacles to their siblings' marriages.[69] Family was seen as a primary support by most sexual minority women;[70] however, in some interviews, the importance of a family of choice emerged with real and online friends being seen as family,[70] and the importance of connection with LGBTQIA+ communities both real and virtual was emphasized.[35,63] These communities provide a sense of belonging and identification, serve as safe spaces and also as collectives for social change and political action.[64]

Factors Related to Well-Being

In a cross-cultural study,[71] GB men in Hisar in India showed more satisfaction with life and subjective happiness compared to those in Havana, Cape Town, and Tromso. Lesbian and bisexual women reported less personal growth, satisfaction in life, subjective well-being, and happiness compared to straight women, while GB and straight men showed equal satisfaction and subjective well-being levels. However, it is important to note that there were just 10 LGB respondents from India who participated in this study. In a study with transwomen, they were found to show low quality of life, and this was not significantly related to age and education.[72]

Transgender individuals were found to show low overall levels of resilience. Higher resilience was found among those with higher education, those occupied in mainstream, and those staying with their family of origin.[73] In studies comparing LGBTQIA+ individuals and cis-heterosexual (cis-het) individuals, LGBTQIA+ individuals showed more negative emotional regulation strategies as compared to cis-het people, with more internal locus of control (LOC). Implementation of positive emotion regulation strategies and a more external LOC was the highest among lesbian women, followed by gay men, bisexual individuals, and then transgender individuals.[74] In another study, heterosexual individuals showed active, instrumental, and positive coping, while homosexual individuals showed behavioral coping strategies.[75]

Among Indian men who use a gay dating website, self-esteem scores were significantly lower in subjects who were in the closet and those who had negative coming out experiences, and there was no association between the age of coming out and self-esteem scores.[65] In one study, transgender individuals were found to show a medium self-esteem level.[76] In a longitudinal study comparing self-esteem and Global Sexual Satisfaction Index scores of transgender individuals pre- and postgender reassignment surgeries, it was found that both sets of scores increased significantly postsurgeries.[77]

Representation of Varied LGBTQIA+ Identities

Most studies had MSM, or GB men, as participants, followed by transwomen, and then lesbian and bisexual women. A lot of confusion has been observed with respect to the use of the terms such as *hijra* and transgender or transwomen, which have often been used interchangeably in studies, even though these identities may be very different. Only 4 studies included transmen,[37,54,63,77] and 2 studies included intersex, genderqueer, nonbinary and genderfluid individuals,[54,63] and individuals identifying as pansexual and queer.[54,70] Only one study described the experiences of an asexual subject.[78]

Queer persons assigned female at birth are particularly marginalized, and interviews revealed that the influence of patriarchy was important, with gender oppression more salient than sexual identity oppression in their experience.[35] These respondents described the challenges of accessing mental health and health services, and of negotiating the public in streets, transport, and toilets.[63]

An ethnographic interview was conducted with a bisexual woman to understand her experiences.[79] Bisexual individuals reported binegativity both from outside and within the LGBTQIA+ community and were more isolated than homosexual individuals.[35]

Almost all the studies have adult participants. A single study was found that studied the experiences of a 16-year-old transwoman that provided insights into childhood experiences and challenges.[80] Another study explored experiences of LGB individuals in childhood based on retrospective reports and described experiences in families and schools as crucial.[64] One case study of a 57-year-old gay man described everyday social life and challenges faced at aging.[81] A study of the experiences of pregeriatric and geriatric LGBTQIA+ individuals[49] found that 64% experienced bullying, hate crimes and discrimination, and isolation due to current lack of a partner or children, alienation from family of origin, and having to live alone.[49]

Only one study explored experiences of parents and siblings in Mumbai.[82] Their initial reactions were characterized by shock, disbelief, denial, withdrawal because of homoignorance, and silence. Factors related to acceptance included gathering information about LGBTQIA+, engaging with the other partner, having a good preexisting relationship with their child, and own experiences of nonconformity.

Interventions

There are limited studies that describe and test mental health interventions for LGBTQIA+ individuals that have been adapted to the Indian context. 3 important recent reviews explored how to adapt traditional family therapy interventions to suit queer individuals,[83] possible substance abuse interventions for LGBTQIA+ individuals,[84] and integrated and intersectional community intervention programs that aim at social inclusion.[85] Kalra[21] described a framework that psychiatrists can use to assist clients with the coming out process.

Some clinical case studies with individual clients have been published: one study examines steps to reduce erotic transference with a lesbian woman,[86] while others explore different facets of the now outdated diagnosis of gender identity disorder (GID) such as careful ruling out of intersex status[87] and need to systematically assess the distress faced by individuals with GID.[88]

Some papers presented research based on qualitative analysis of experiences of professionals providing interventions in India. One study described "conversion therapy" as used by many health professionals and their justifications for doing so; it highlighted how these interventions continue to be used.[89] Ranade and Chakravarty in 2013 explored affirmative therapeutic practices used by mental health professionals in India working with the LGBTQIA+ community, and used the insights obtained to generate a module for gay affirmative counseling practice.[90]

One study[91] described a queer-affirmative cognitive behaviour therapy (CBT)-based group therapy intervention for LGBTQIA+ individuals facilitated by queer mental health professionals called SAAHAS, that at a preliminary level showed promise for reducing distress and improving mental health of queer individuals.

Societal Attitudes

Badgett in 2014[25] cited the results of the 2006 World Value Survey, where 64% Indians said that they believed homosexuality is never justified, while only 14% said that it is sometimes or always justified, and 41% stated that they would not like a homosexual neighbor. Compared to other countries, India falls in the middle with respect to acceptance of homosexuality, and attitudes have become more positive over time. However, acceptance is still a long way away, as more recent studies examining attitudes toward homosexuality revealed the presence of ambivalent attitudes amongst most heterosexual people and the presence of a number of harmful prejudices.[58,92] One study found that undergraduate medical students held neutral attitudes toward and lacked knowledge about the LGBTQIA+ community.[93]

Some insights from research studies suggest possible ways to increase acceptance in society. More knowledge about homosexuality was associated with more positive attitudes.[93] In studies amongst corporates, collaboration amongst employees was associated with more acceptance of homosexual individuals.[94] In keeping with the contact hypothesis, one study found less implicit bias against homosexuals for those in more contact with them.[95] One pre- and postintervention study[96] found that targeted interventions (through videos about the LGBTQIA+ community) were found to contribute to significant positive attitudinal changes with respect to attitudes toward homosexual individuals.

Conclusion

Studies and reviews in the last decade provide some insights into the review questions mentioned earlier:

1. What are the key findings from research conducted about mental health aspects of LGBTQIA+ individuals?

Cis-gay men, transgender women, and *hijras* have been most represented in research, while cis-lesbian women, bisexual individuals, genderqueer individuals, transmen, and asexual individuals are less represented. Prevalence rates of mental health concerns among LGBTQIA+ individuals are varied but are typically higher than their population prevalence rates. Lived experiences of queer individuals have been found to be different from those of cis-het individuals with unique challenges faced by them across the lifespan that are related to their identity formation, intimate partner relationships, disclosure, and social acceptance. Findings

related to resilience, self-esteem, and satisfaction are limited and inconsistent. Societal attitudes seem to have improved over time but continue to be ambivalent.

2. What do we know about potential pathways that may exacerbate mental health concerns in this group?

There is evidence supporting the adapted minority stress model to explain how stigma experienced by these minority groups contributes to higher stress and poor mental health outcomes.

3. What do we know about the role of existing mental health systems in working with this group in facilitating or mitigating these pathways?

Researchers and reviewers have commented on how mental health care professionals often pathologize these identities, and stigma and discrimination by health care providers often impact access to treatment (and may also possibly add to distress given the minority stress model).

4. What do we know about interventions that might be useful with this group?

Some studies and reviews have outlined gay affirmative counselling frameworks and have outlined the potential for group-, family-, and community-based targeted interventions for LGBTQIA+ individuals.

5. What data are we missing that needs to be explored further?"

- More epidemiological studies with larger and more inclusive populations are recommended from different parts of the country, including more semiurban and rural areas.
- More research is needed on the lives of sexual minority women, transgender and gender nonconforming individuals, intersex, asexual individuals, and their unique challenges, rather than focusing just on the experiences of nonheterosexually identifying cis-men.
- We need more research studying variables related to positive psychology rather than only those related to illness.
- Research needs to be more intersectional, and explore the impact of intersecting identities based on gender, sexuality, age, religion, class, caste, and disability.
- We need more intervention studies outlining specific therapeutic models adapted to the Indian context and designed for the LGBTQIA+ community.
- We need psychological research to be less heteronormative, with studies on all topics inclusive of the experiences of gender and sexual minorities and not just cis-het individuals.

We hope that the next decade brings us more research along the above parameters.

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References

1. Navtej Singh Johar & Ors. v. Union of India. Writ Petition (Criminal) No. 76 of 2016, Supreme Court of India. https://www.sci.gov.in/supremecourt/2016/14961/14961_2016_Judgement_06-Sep-2018.pdf. Published September 2018. Accessed August 10, 2019.
2. Kealy-Bateman W. The possible role of the psychiatrist: the lesbian, gay, bisexual, and transgender population in India. *Indian J Psychiatry.* 2018;60:489-493.
3. Ravindran TKS, Seshadri T. A health equity research agenda for India: results of a consultative exercise. *Health Res Policy Sy.* 2018;16. doi: https://doi.org/10.1186/s12961-018-0367-0.
4. Kottai SR, Ranganathan S. Fractured narratives of psy disciplines and the LGBTQIA+ rights movement in India: a critical examination. *IJME.* 2019. doi: https://doi.org/10.20529/IJME.2019.009.
5. Das K, Sathyanarayana Rao TS. A chronicle of sexuality in the Indian subcontinent. *J Psychosexual Health.* 2019;1(1):20-25. doi: 10.1177/2631831818822017 journals.sagepub.com/home/ssh.
6. Kapila G, Kumar A. Homosexuality: road to visibility. *IJIP.* 2015;3(1):73-101.
7. Azad SAK, Nayak PK. Health care barriers faced by LGBT people in India: an investigative study. *Research Innovator.* 2016;3(5):77-82.
8. Sharma H. Are we being trained to discriminate? Need to sensitize doctors in India on issues of gender and sexuality. *RHiME*. 2018;5:35-43.
9. Math SB, Seshadri SP. The invisible ones: sexual minorities. *Indian J Med Res.* 2013;137(1): 4-6.
10. Patel VV, Mayer KH, Makadon HJ. Men who have sex with men in India: a diverse population in need of medical attention. *Indian J Med Res.* 2012;136:563-570.
11. Singh P. Between legal recognition and moral policing: mapping the queer subject in India. *J Homosexual.* 2015. doi: 10.1080/00918369.2016.1124700.

12. Sawant NS. Transgender: status in India. *Ann Indian Psychiatry.* 2017;1:59-61.
13. Virupaksha HG, Muralidhar D, Ramakrishna J. Suicide and suicidal behavior among transgender persons. *Indian J Psychol Med.* 2016;38:505-509.
14. 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),105-120.
15. Kar A. Legal recognition and societal reaction on sexual minorities: reflections on moral policing and mental health of LGBT community in India. *RSC.* 2018;10(2):4-30.
16. Sathyanarayana Rao TS, Jacob KS. Homosexuality and India. *Indian J Psychiatry.* 2012;54:1-3.
17. Sathyanarayana Rao TS, Andrade C. Older brothers and male homosexuality: antibodies as an explanation. *J Psychosexual Health.* 2019;1(2):109-110. doi: 10.1177/2631831819855199 journals.sagepub.com/home/ssh.
18. Rozatkar AR, Gupta N. The interplay of sexual orientation, social discrimination, and legislation: a consensus yet awaited! *Indian J Soc Psychiatry.* 2018;34:95-98.
19. Sathyanarayana Rao TS, Rao GP, Raju M, et al. Gay rights, psychiatric fraternity, and India. *Indian J Psychiatry.* 2016;58:241-243.
20. Kalra G. Hijras: the unique transgender culture of India. *Int J Cult Ment Health.* 2012;5(2):121-126.
21. Kalra G. A psychiatrist's role in "coming out" process: context and controversies post-377. *Indian J Psychiatry.* 2012;54:69-72.
22. Chandran V. From judgement to practice: Section 377 and the medical sector. *IJME.* 2009;6(4):198-199.
23. Chandra P. Will the Supreme court's judgement on Section 377 affect mental healthcare for LGBT groups? *IJME.* 2009;6(4):200-201.
24. Kalra G. Pathologising alternate sexuality: shifting psychiatric practices and a need for ethical norms and reforms. *IJME.* 2012;9(4):291-292.
25. Badgett ML. The economic cost of stigma and the exclusion of LGBT people: a case study of India [published 2014]. World Bank Group. http://www.documents.worldbank.org/curated/en/527261468035379692/pdf/940400WP0Box380usion0of0LGBT0People.pdf. Accessed August 10, 2019.
26. Nakkeeran N, Nakkeeran B. Disability, mental health, sexual orientation and gender identity: understanding health inequity through experience and difference. *Health Res Policy Sy.* 2018;16(1). doi: 10.1186/s12961-018-0366-1.
27. Sathyanarayana Rao TS, Jacob KS. The reversal on Gay Rights in India. *Indian J Psychiatry.* 2014;56:1-2.
28. Kalra G, Gupta S, Bhugra D. Sexual variation in India: a view from the west. *Indian J Psychiatry.* 2010;52:S264-S268.
29. Chakraborty K, Thakurata RG. Indian concepts on sexuality. *Indian J Psychiatry.* 2013;55:250-255.
30. Rawat R. Multi-dimensional burden on Lesbian, Gay, Bisexual, and Transgender (LGBT) community: health perspective. *AASCIT Communications.* 2015;2(6):320-325.
31. Sathyanarayana Rao TS, Tandon A. Women and mental health: Bridging the gap. *Indian J Psychiatry.* 2015;57:199-200.
32. Lodha P, De Sousa A. Geriatric mental health: the challenges for India. *J Geriatr Ment Health.* 2018;5:16-29.
33. Sravanti L, Girimaji SC. Sex, Sexuality and gender-related issues in child psychiatric practice: a Review. *J Psychosexual Health.* 2019;1(3-4):236-240.
34. Prajapati AC, Parikh S, Bala DV. A study of mental health status of men who have sex with men in Ahmedabad city. *Indian J Psychiatry.* 2014;56:161-164.
35. Bowling J, Dodge B, Banik S, et al. Perceived health concerns among sexual minority women in Mumbai, India: an exploratory qualitative study. *Cult Health Sex.* 2016. doi: 10.1080/13691058.2015.1134812.
36. Soohinda GS, Jaggi PS, Sampath H, Dutta S. Depression and its correlates in men who have sex with men (MSM) in India. *Indian J Soc Psychiatry.* 2018;34:239-244.
37. Hebbar YR, Singh B. Psychiatric morbidity in a selective sample of transgenders in Imphal, Manipur: a descriptive study. *Ann Indian Psychiatry.* 2017;1:114-117.
38. Patel SK, Prabhakar P, Saggurti, N. Factors associated with mental depression among men who have sex with men in Southern India. *Health.* 2015;7:1114-1123. doi: 10.4236/health.2015.79127.
39. 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. *Soc Sci Med.* 2012;74:1261-1268.
40. Mimiaga MJ, Biello KB, Sivasubramanian M, Mayer K. Psychosocial risk factors for HIV sexual risk among Indian men who have sex with men. *AIDS Care: Psychological and Socio-medical Aspects of AIDS/HIV.* 2013;25(9):1109-1113. doi: 10.1080/09540121.2012.749340.
41. Sivasubramanian M, Mimiaga MJ, Mayer KH, et al. 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;16:4:450-462. doi: 10.1080/13548506.2011.554645.
42. Tomori C, McFall AM, Srikrishnan AK, et al. Diverse rates of depression among men who have sex with men (MSM) across India: insights from a multi-site mixed method study. *AIDS Behav.* 2016;20:304-316. doi: 10.1007/s10461-015-1201-0.
43. Ekstrand ML, Rawat S, Patankar P, et al. Sexual identity and behaviour in an online sample of Indian men who have sex with men. *AIDS Care.* 2016. doi: 10.1080/09540121.2016.1271103.
44. Chakrapani V, Newman P, Shunmugam M, et al. Syndemics of depression, alcohol use, and victimisation, and their association

with HIV-related sexual risk among men who have sex with men and transgender women in India. *Glob Public Health.* 2017;12(2):250-265.

45. Niranjan Hebbar YR, Majumder U, Singh RL. A study on homosexuals and their psychiatric morbidities in a northeastern state of India, Manipur. *Indian J Soc Psychiatry.* 2018;34:245-248.
46. Wilkerson JM, Di Paola A, Rawat S, et al. Substance use, mental health, HIV testing, and sexual risk behaviour among men who have sex with men in the state of Maharashtra. *AIDS Educ Prev.* 2018;30(2):96-107.
47. Yadav D, Chakrapani V, Goswami P, et al. Association between alcohol use and HIV-related sexual risk behaviours among men who have sex with men (MSM): findings from a multi-site bio-behavioural survey in India. *AIDS Behav.* 2014;18:1330. doi: 10.1007/s10461-014-0699-x.
48. Safren SA, Thomas BE, Mimiaga MJ, et al. Depressive symptoms and human immunodeficiency virus risk behavior among men who have sex with men in Chennai, India. *Psychol Health Med.* 2009;14(6):705-715.
49. Shiva Prasad G. Unmet needs assessment of geriatric and pre geriatric lesbian, gay, bisexual, transgender, intersex (LGBTI) individuals in urban India. *Indian J Gerontology.* 2016;30(1):122-137.
50. Ganju D, Saggurti N. Stigma, violence and HIV vulnerability among transgender persons in sex work in Maharashtra, India. *Cult Health Sex* 2017. doi: 10.1080/13691058.2016.1271141.
51. Count me In! Research Report on Violence against disabled, lesbian, and sex-working women in Bangladesh, India, and Nepal. Delhi: CREA. doi: 10.1016/S0968-8080(12)40651-6. Published 2012. Accessed August 10, 2019.
52. Mal S. The hijras of India: A marginal community with paradox sexual identity. Indian J Soc Psychiatry. 2018;34:79-85.
53. Mimiaga MJ, Closson EF, Thomas B, et al. Garnering an in-depth understanding of men who have sex with men in Chennai, India: a qualitative analysis of sexual minority status and psychological distress. *Arch Sex Behav.* 2014. doi: 10.1007/s10508-014-0369-0.
54. Bowling J, Mennicke A, Blekfeld-Sztraky D, et al. The influences of stigma on sexuality among sexual and gender minoritized individuals in urban India. *Int J Sex Health.* 2019. doi: 10.1080/19317611.2019.1625994.
55. Thomas B, Mimiaga MJ, Mayer KH, et al. The influence of stigma on HIV risk behaviour among men who have sex with men in Chennai, India. *AIDS Care: Psychological and Socio-medical Aspects of AIDS/HIV.* 2012;24(11):1401-1406. doi: 10.1080/09540121.2012.672717.
56. Maroky AS, Ratheesh A, Viswanath B, et al. 'Ego-dystonicity' in homosexuality: an Indian perspective. *Int J Soc Psychiatry.* 2014;1-8. doi: 10.1177/0020764014543709.
57. Meyer IH. Minority stress and mental health in gay men. *J Health Social Behav.* 1995;36:38-56.
58. Srivastava S, Singh P. Psychosocial roots of stigma of homosexuality and its impact on the lives of sexual minorities in India. *Open J Soc Sci.* 2015;3:128-136. doi: 10.4236/jss.2015.38015.
59. Chakrapani V, Vijin PP, Logie CH, et al. Understanding how sexual and gender minority stigmas influence depression among trans women and men who have sex with men in India. *LGBT Health.* 2017;4(3):217-226.
60. Chakrapani V, Kaur M, Newman PA, et al. Syndemics and HIV-related sexual risk among men who have sex with men in India: Influences of stigma and resilience. *Cult Health Sex.* 2018. doi: 10.1080/13691058.2018.1486458.
61. Stief, M. The sexual orientation and gender presentation of Hijra, Kothi, and Panthi in Mumbai, India. *Arch Sex Behav.* 2017;46:73-85. doi: 10.1007/s10508-016-0886-0.
62. Tomori C, Srikrishnan AK, Ridgeway K, et al. Perspectives on sexual identity formation, identity practices, and identity transitions among men who have sex with men in India. *ArchSexBehav.* 2016. doi: 10.1007/s10508-016-0775-6.
63. Breaking the binary. LABIA. http://orinam.net/content/wp-content/uploads/2017/06/BTB-English.pdf. Published Aril 2013. Accessed August 10, 2019.
64. Ranade K. *Growing up Gay in Urban India: A Critical Psychosocial Perspective*. Mumbai: Springer; 2019.
65. Soohinda G, Jaggi PS, Sampath H, Dutta S. Self-reported sexual orientation, relationships pattern, social connectedness, disclosure, and self-esteem in Indian men who use online gay dating website. *OJPAS.* 2018. [Epub ahead of print]
66. Biswas M. Socio-economically convenient 'coming-out' decision of India's lesbian, Gay, bisexual community. *Int J Res Cult Soc.* 2018;2(2):324-337.
67. Jain G, Sahni SP, Sehgal N. Sexual identity expression on the internet: an empirical study of homosexuals, heterosexuals, and bisexuals in India. In: Sahni SP, Jain G, eds. *Internet Infidelity.* Singapore: Springer. doi: 10.1007/978-981-10-5412-9_7.
68. Closson EF, Sivasubramanian M, Mayer KH, Srivastava A, et al. The other side of the bridge: exploring the sexual relationships of men who have sex with men and their female partners in Mumbai, India. *Cult Health Sex.* 2014;16(7):780-791. doi: 10.1080/13691058.2014.911960.
69. Veena KV, Sridevi Sivakami PL. Social exclusion have a negative impact on the health of transgender. *Golden Research Thoughts*. 2011;1-4.
70. Bowling J, Dodge B, Banik S, et al. Social support relationships for sexual minority women in Mumbai, India: a photo elicitation interview study. *Cult Health Sex.* 2017. doi: 10.1080/13691058.2017.1337928.
71. Traen B, Martinussen M, Vitterso J. Sexual orientation and quality of life among university students from Cuba, Norway, India, and South Africa. *I J Homosexuality.* 2009;56:655-669. doi: 10.1080/00918360903005311.

72. Lakshmipathy S, Thenmozhi S. Quality of life: a study of transgenders. *IJIP.* 2019;7(2):571-575. doi:10.25215/0702.069.
73. Virupaksha HG, Muralidhar D. Resilience among transgender persons: Indian perspective. *Indian J Soc Psychiatry.* 2018;34:111-1115.
74. Podder P, Mukherjee T. A study on cognitive emotion regulation and locus of control in LGBT. *IOSR-JHSS.* 2016;21(12-1):1-9.
75. Jethwani KS, Mishra SV, Jethwani PS, Sawant NS. Surveying Indian gay men for coping skills and HIV testing patterns using the internet. *J Postgrad Med.* 2014;60:130-134.
76. Shilpa PS, Veena S. Self-esteem among transgenders. *IJELLH.* 2017;5(4):1-16.
77. Madhusudahan S, Vanprabha GV. Transgenders: An analysis of their body, mind and culture. *IJIP.* 2015;3(1-6):18-24.
78. Hebbar YRN, Magh S, Dash A. "I am no male or female or any other, I have no sex": a case report on asexuality. *OJPAS.* 2017;9:77-78. doi: 10.5958/2394-2061.2018.00017.4.
79. Chithrangathan C. Mapping the bisexual experience of a Keralite woman: glimpses into India. *Sex Relation Ther.* 2017. doi: 10.1080/14681994.2017.1419566.
80. Chawla, A. The hidden identity: exploring experiences of one of the youngest transgender woman in India. *IJIP. 2018;*6(3):145-158. doi:10.25215/0603.096.
81. Mishra A. Body as a site of expression: intersections of sexuality, desires and ageing. *Indian J Gerontology,* 2019;33(1):107-118.
82. Ranade K, Shah C, Chatterjee S. Making sense: familial journeys towards acceptance of gay and lesbian family members in India. *IJSW.* 2016;77(4):437-458.
83. Das BS, Ghosh S, Kottai SR. Practice of family therapy in a heteronormative society of India from queer theory perspective. *OJPAS.* 2016. [Epub ahead of print].
84. Mandal P, Dhawan A. Interventions in individuals with specific needs. *Indian J Psychiatry.* 2018;60:553-558.
85. Sinha VK, Sinha-Kerkhoff K. Community integration of people with nonheterosexual identities in Indian society: an integrated and intersectional approach. *Indian J Soc Psychiatry.* 2018;34:296-302.
86. Devi KD, Manjula M, Math SB. Erotic transference in therapy with a lesbian client. *Ann Psychiatry Ment Health.* 2015;3(3):1029.
87. Kukreti P, Kandpal M, Jiloha RC. Mistaken gender identity in non-classical congenital adrenal hyperplasia. *Indian J Psychiatry.* 2014;56:182-184.
88. Gupta D, Elwadhi D, Mehta M, Kaw N. Psycho-social functioning in an individual with Gender Identity Disorder. *Psychol Stud.* 2012;57(3):269-272.
89. Ranade K. Medical response to male same-sex sexuality in Western India: an exploration of 'Conversion Treatments' for homosexuality. Health and Population Innovation Fellowship Programme Working Paper, No. 8. 2009. New Delhi: Population Council.
90. Ranade K, Chakravarty S. Conceptualising gay affirmative counselling practice in India building on local experiences of counselling with sexual minority clients. *IJSW.* 2013;74(2):335-352.
91. Wandrekar J, Nigudkar A. Learnings from SAAHAS: a queer affirmative CBT-based group therapy intervention for LGBTQIA+ individuals in Mumbai, India. *J Psychosexual Health.* 2019;1(2):1-10. doi: 10.1177/2631831819862414.
92. Biswas M. Level of homophobia among adult, educated, heterosexual citizens of Kolkata for the different sexual orientations. *Res Revol.* 2018;6(11):43-54.
93. Banwari G, Mistry K, Soni A, Parikh N, Gandhi H. Medical students and interns' knowledge about and attitude towards homosexuality. *J Postgrad Med.* 2015;61:95-100.
94. K Kaur, Stephen S. Relationship between organizational culture and attitude of millennial employees towards homosexuality in the hospitality sector in India. *IJIP.* 2019;7(2):286-298. doi:10.25215/0702.034.
95. Sahni S, Gupta B, Nodiyal K, Pant V. Attitude of Indian youth towards homosexuality. *IJIP.* 2016;4(1-83):59-69.
96. Kala K, Goyal S, Rana S, Bhatia H. Attitude change towards homosexuality post intervention. *IJIP.* 2018;6(3):27-34. doi:10.25215/0603.043.