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HIV risk management among sexual minority men in China: context, lived experience, and implications for pre-exposure prophylaxis implementation

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Abstract

This study examined the social context and lived experience of HIV risk management among sexual minority men in China. An interpretative phenomenological analysis of 25 in-depth interviews with participants in five Chinese cities was undertaken. Findings show how men managed HIV risk in the context of high risk perception and anxiety, and strong perceived social discrimination and marginalisation. Men's choice of risk management strategies was influenced by their often-negative perceptions of gay community, social norms around condom use, and prior lived experience. Results underscore the importance of considering these contexts when planning pre-exposure prophylaxis (PrEP) implementation in China and highlight the need for strategies to address potential PrEP-related stigma among sexual minority men.

Keywords

HIV; risk management; PrEP; sexual minority men; China

Introduction

HIV risk management strategies have changed significantly due to advances in scientific knowledge, diagnostic technology, and treatment and prevention medication (Joint United Nations Programme on HIV/AIDS 2010). With abundant evidence showing the safety, efficacy and real-world effectiveness of HIV pre-exposure prophylaxis (PrEP) (Grant et al. 2010; Smith et al. 2020), PrEP has become an increasingly popular prevention strategy for gay, bisexual and other men who have sex with men (hereinafter referred to as 'sexual minority men') to prevent HIV (Sullivan et al. 2020).

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Disclosure statement

No potential conflict of interest was provided by the author(s).

Data availability statement

The data analysed during the current study are available from the corresponding author on reasonable request.

In China, sexual minority men experience minority stress from cultural, social and internalised sources with damaging effects on their mental and HIV-related health (Sun et al. 2020). While homosexuality was decriminalised in China in 1997 and depathologised in 2001 (Wu 2003), a recent national study found that heterosexual individuals' acceptance towards sexual minorities remains low and perceived and experienced discrimination among sexual minority individuals is high (Wang et al. 2020). The family-orientated, heteronormative Chinese culture, which places great importance on fulfilling family obligation (i.e. getting married, having children), has been identified as a major stressor for Chinese sexual minority men (He et al. 2017; Sun et al. 2020).

In a context of high stigma and low social support, Chinese sexual minority men bear a disproportionate burden of HIV, with an estimated HIV incidence of approximately 5 per 100 person-years (Dong et al. 2019). Designing effective interventions to curb the epidemic requires a thorough understanding of HIV risk management among sexual minority men. Unlike the USA, where prevalence and trends in HIV risk management among sexual minority men have been well documented in clinical data, national surveys, and longitudinal studies (Snowden et al. 2014; Paz-Bailey et al. 2016), the extent to which Chinese sexual minority men use strategies beyond condom use and HIV testing to manage HIV-related risk is unknown. Factors influencing choice of strategy also remain unexplored.

To address this gap, we conducted a qualitative investigation among sexual minority men in five Chinese cities exploring lived experience and the social context of HIV risk management. We aimed to understand how novel strategies like PrEP can best be incorporated into HIV prevention. PrEP has received national endorsement in China (Society of Infectious Diseases Chinese Medical Association 2018); however, it has yet to be integrated into routine HIV prevention provision. With ongoing real-world PrEP studies (ClinicalTrials.gov 2020; Wang et al. 2019) already underway, this study contributes to the emerging effort to implement and scale-up PrEP. We explore the implications of our findings for the design of culturally relevant, contextualised HIV prevention in China.

Methods

Study design

Qualitative data were drawn from a mixed-methods research project (hereinafter referred to as 'the parent study') with sexual minority men and transgender women who have sex with men recruited from five major metropolitan areas in China (Beijing, Changsha, Guangzhou, Shanghai, Shenyang). The parent study identified perceptions, beliefs and experiences of HIV prevention research by sexual minority men and transgender women to design strategies facilitating the introduction of novel biomedical HIV prevention modalities.

The parent study comprised in-depth interviews and quantitative surveys. In this analysis of HIV risk management, we analysed data from three out of four interview domains: (1) sexuality, outness, and engagement with the community of sexual minority men (e.g.: 'What word would you use to describe your sexuality?'); (2) understanding of HIV risk, sexual health and experience seeking sexual health care (e.g.: 'How do you feel about your sex life?'); and (3) perceptions of and intention to use biomedical HIV prevention (e.g.: 'What

would be the advantage/disadvantage of taking the PrEP pills before and after sex, compared to taking it every day?').

The fourth interview domain within the parent study concerned participants' experience with, perceptions of and willingness to participate in HIV prevention research studies. We did not include this domain for analysis of this paper because it is less relevant to the topic of HIV risk management. We also analysed demographic characteristics and sexual behaviour as elicited by quantitative surveys.

Recruitment and sample

Participants were recruited between January and April 2018 using purposive, venue-based sampling in local community-based organisations (CBOs) and HIV testing centres.

Individuals were eligible for the parent study if they were: (1) 18 years of age or older; (2) assigned male at birth; (3) willing and able to provide informed consent; and (4) had had anal sex with a male partner at least one time in the past six months. Individuals with a known diagnosis of HIV/AIDS were excluded from the study.

A total of 100 individuals (20 per site) were interviewed in the parent study. In this analysis of HIV risk management, we excluded participants who self-identified as transgender women given that their lived experiences and HIV risk factors are likely distinct from sexual minority men in China (Yang et al. 2016). We randomly selected five interviews from each site for inclusion in this study, resulting in a total analytical sample of 25 individuals.

Study procedures

Study procedures were conducted by four staff members (including the third author) in the Good Participatory Practices Program. Details of the programme are described elsewhere (Liu and Meyers 2020). Staff had between two to five years of experience conducting social science research and a deep familiarity with sexual minority populations in China.

After obtaining written informed consent, interviewers conducted one-on-one interviews with participants lasting 50 to 90 min. After the interview, a 15-minute quantitative survey was administered via smartphone or electronic tablet. Participants were compensated $15 to $29 for their time, based on city-specific standard determined by local collaborators. All procedures were conducted in Mandarin Chinese in private rooms located at local HIV testing centres or CBOs.

All interviews were audio-recorded and transcribed. After data collection was complete, one-fifth of the interviews from each site were randomly selected for translation into English by a professional company. The first author, who is bilingual in English and Mandarin Chinese, checked translated transcripts for accuracy and completeness, returning to listen to interview recordings if necessary.

Data analysis

We chose to use interpretative phenomenological analysis (IPA) to guide our analysis. IPA is an experiential, qualitative methodology commonly used to examine how individuals

make sense of their lived experience. IPA was particularly appropriate for this analysis because of its utility in unpacking complex and nuanced experiences and processes, and in understanding meaning-making among stigmatised individuals (Spiers et al. 2016; Semlyen, Ali, and Flowers 2018).

Our analysis followed the guide to data analysis using IPA outlined by Smith and Osborn (2003). We started the analysis by familiarising ourselves with the data. YW and LX independently read three transcripts and wrote analytic memos for each transcript, treating each interviewee as an individual 'case'. Following discussion, we developed an 'episode profile', a structured template for analysts to summarise key emerging themes. The template allowed analysts to write their reflections on each case as well as create thick descriptions characterising participants' perceptions of HIV risks and their experiences with risk management. In total, YW and LX reviewed 25 transcripts (five per site). Internal discussion after the first twenty transcripts determined that data saturation was close to being reached; we then reviewed an additional five transcripts until we started to see total redundancy in the data.

Next, YW and LX looked for convergence and divergence in the data across participants by creating a 'project-level diagram', displaying main themes, subthemes, powerful quotes, connections and disconnections across all 25 cases. All authors discussed and revised the draft diagram, agreed on final themes and developed an outline of the manuscript.

Ethics review

Study protocol and all procedures were approved by the Institutional Review Board of the School of Public Health at Fudan University (Shanghai, China). We assigned pseudonyms to interviewees to protect their confidentiality.

Results

Sample characteristics

Table 1 summarises key demographic information of the 25 participants included in the analysis. One-fifth of participants were previously or currently married to a woman. Over two-thirds of the participants did not have a regular partner. Among eight individuals who reported a regular partner, seven reported a non-monogamous relationship or were uncertain whether the relationship was monogamous. In the three months prior to the interview, four participants had condomless anal sex with a non-regular partner, and ten men reported having had more than one male partner.

Thematic analysis

Six major themes were identified as detailed below.

'Your whole life will be ruined': high HIV risk perception and anxiety—

Participants reported very high HIV risk perception and substantial anxiety about HIV infection. Almost everyone knew someone who had HIV. Shan had accompanied several friends to get tested for HIV and witnessed friends receiving positive testing results:

> I brought three people to the CBO for testing, and they all tested positive. Later, I asked another friend to get tested. He had refused to go previously but decided to go eventually. After testing three or four times, he tested positive … … I think it's so scary.

Le described how he learned that HIV was prevalent in his social circle:

> [HIV] is so close to me. Because I always hear my friends talking about it. They'd say: 'Oh, there's one more person got it [HIV]', 'this person has it', or 'they went for testing and were positive'. I don't know who exactly has HIV, but from what I heard from my friends, it sounds like many people around me are HIV-positive …

Participants expressed strong anxiety towards HIV infection. Lin expressed his strong fear of HIV infection and described the likely consequences: 'In China today, if you're infected and are not receiving good care, this means your whole life will be ruined.' Longlong, a volunteer at an HIV prevention CBO, had seen many sexual minority men diagnosed with HIV:

> I've seen so many people who were diagnosed with HIV, and how their lives were changed after the diagnosis … … I knew someone who was a pilot, but he got HIV and it was the end of his professional life. Also, for people who are married to a straight woman, it is very difficult for them to explain their HIV infection to their families. I think for us as gay men, life has already been very difficult. So, we should not make our lives as gays even harder by getting HIV.

In contrast to the high HIV risk perception and anxiety, many participants expressed little concern about STIs (e.g. syphilis, Chlamydia, gonorrhoea). No one in our sample was aware of asymptomatic infection and most people did not see the need for regular testing for STIs. Even for people who regularly tested for HIV, STI testing was not part of their routine sexual health care. For example, when asked about how often he tested for STIs, Lao Li, who tested for HIV every two to three months, stated: 'I don't think I need to have regular STI tests … … I think I can tell by looking if I have things like syphilis, gonorrhoea or genital warts.' As a result, participants' risk management strategies (i.e. regular testing, condom negotiation) primarily focused on mitigating HIV risk.

'Living in the shadow': social discrimination and marginalisation of sexual minority men is prevalent—Many men discussed perceived and experienced discrimination and stigma related to their sexuality. Zhou described himself as 'living in the shadows', discreetly seeking male partners outside his marriage while keeping his sexuality secret.

> I'm very unhappy because I'm not living as my true self. If I did, I wouldn't be accepted by others. And when I have sex with other men, I have to worry about HIV all the time. Many gay men are just as excellent as straight people, but because they're gay, they are not acknowledged or accepted by society.

Preventing HIV was Zhou's highest priority because HIV had been framed as a gay disease and diagnosis of HIV would lead to the disclosure of his sexual identity. To manage HIV risk, he reported only having non-penetrative sex with his male partners ('just kissing and

hugging and cuddling … … I am very used to this now. I think it works fine for me, and it's safe'), although in interview Zhou also acknowledged his clear preference for condomless sex:

> Of course, I have to refrain. I think if I do not refrain [from having condomless sex], I would get AIDS later. To be honest with you, I don't usually talk about this with other people … regardless of heterosexual or homosexual sex, no one likes condom … As we often say, 'skin on skin, so satisfying' [*rou ya rou, hao man zu*], no one likes to use condoms.

Social discrimination and marginalisation were cited as major barriers to maintaining long-term relationships. Many participants expressed their longing for a loving companion and a long-term exclusive relationship. A monogamous relationship in which both parties went regularly for HIV testing was considered one of the best HIV prevention strategies. However, men stressed the difficulty of maintaining such relationships in practice due to lack of societal and structural support. Lao Li described himself as follows:

> I'm in my 40s and had several long-term relationships. Every time I made 100% effort to maintain a relationship, the outcomes were not good … … first of all, we're sexual minorities. This means that you have to find the person based on sex role, age, and other qualities that you value in a small group of people. It's already very difficult. Plus, societal attitudes towards us are not friendly, so you and your partner have to develop the relationship secretly. It's so easy to break up if either of the two parties is not trying hard enough to keep the relationship going.

In response to the difficulty of maintaining a monogamous stable relationship, some participants adjusted their relationship goals. For example, Yao who described himself as someone 'who often hooks up' had adjusted his expectations and decided to only focus on finding sexually compatible partners who could bring him sexual pleasure.

> To find a partner is very, very difficult. This means it's very hard to find a compatible partner. So, as I grow older, I have to be content with the second-best choice by not requiring so much on the spiritual level. If you want to satisfy all the needs: of spirit, of body, of look, of sex, then there is no such a person. You can't find one. Or even if you can, it's so rare like the phoenix's feathers, very hard to find …

Many interviewees experienced the current HIV prevention approach in China as discriminatory and felt that public health campaigns labelled them as vectors of HIV, leading to their further marginalisation. As Ke pointed out:

> The issue is that nowadays there's a lot of discrimination against HIV and gay men … in China, most HIV prevention programmes only target [the] gay community … I know they do so because we are the so-called 'high-risk group'. I understand they want to control the epidemic in the high-risk population first, and then maybe they will think about messaging that is more for the general public. However, this approach itself suggests discrimination against gay men, and it promotes moral judgement of us.

'No one around you can be fully trusted': negative perceptions of the community and distrust of other sexual minority men—Negative perceptions of the gay community, and subsequently, distrust of other sexual minority men emerged as a key theme influencing respondents' risk management. The majority of participants had negative opinions toward the *quanzi* (a term used by Chinese gay men to refer to the 'gay circle'), perceiving this community as 'disturbed and chaotic'. They saw people in the circle as promiscuous, 'dirty' and 'unclean', having frequent (often condomless) sex with multiple partners and posing a risk to others in the community. As Longlong put it:

> I think some people in the circle are 'clean', in terms of their lifestyle, some are not. For those who are 'unclean', I really don't understand their lifestyle. They hook up every day, pay no attention to protection. I think this is really a high-risk behaviour, not only to themselves, but it poses risk to others who have sex with them. If you are seeing someone, you can never be sure of their behaviours or what they did before. So, the risk of HIV is always there.

Many men displayed an 'us versus them' mentality with respect to perceptions of 'promiscuity' in the gay community. For example, Wen said: 'I think I am quite different from other gay men I know … … I actually know a lot of gay men in this city. But those people are chaotic and have a lot of crazy sex'. His view was echoed by Gu who described how his relationship goal differed from others in the *quanzi*.

> I feel some people are overindulging in sexual pleasures … for me, personally, I don't think I'm part of that group. What I care about is to find my other half. But for many people, the initial purpose of seeing each other is just for sex.

In the context of negative perceptions of promiscuity, an active effort to manage HIV risk was interpreted with suspicion. For instance, Shan was viewed as an 'outlier' by his peers because of his regular HIV testing habit. He was judged for going to testing 'too often' and teased for being 'promiscuous'. Despite this, he maintained the habit:

> My friends sometimes ask me 'why are you going again?' … … they're not like me, they don't have good awareness, and they think that 'if you don't have any problem, why do you test so often?' … they think I'm going too often, they ask me if I'm hooking up all the time.

Negative perceptions of 'promiscuous men' sowed distrust among sexual minority men. They worried that people living with HIV might intentionally hide their HIV status and felt that they could not trust other men. As Shi said: 'I am in this gay circle and gay men are very susceptible to HIV. So, in this circle, there is no way but to be cautious. Because no one around you can be fully trusted'.

Men constructed 'rules' for themselves in terms of partner selection to manage HIV risk. Participants assessed potential partners by their prior sexual behaviour and the social circles they were in, to determine whether they were 'clean' and 'safe'. These 'rules' were usually enacted in combination with HIV testing and condom use. Longlong explained:

> Usually, if I plan to have sex with someone, I would use rapid HIV [self] testing to test the person. In addition, I have my own assessment, like, if this person is

> promiscuous or not, whether he had a lot of condomless sex with other people. But I think this type of assessment is really of no use.

If a potential partner was deemed ‘safe’ to have sex with, participants would seek to develop a regular relationship, with the goal of having along-term sexual, but not necessarily romantic, relationship. However, their decision-making as to whether a partner was ‘safe’ or ‘trustworthy’ was based on gut instinct rather than on objective criteria. As Fang said: ‘It’s all based on my feelings, whether or not I think this person is trustworthy; and I judge from the impression he gives me’.

‘Condoms should absolutely be used’: condom use social norms strongly influenced men’s choice of risk management strategies—All participants referred to condoms as their primary HIV risk management strategy. The majority strongly endorsed condom use norms and stressed the importance of 100% condom use: ‘There is no single time I wouldn’t use a condom. It’s absolutely necessary to use a condom every time’ (Yao). A small number of participants held contrasting views about condoms: ‘I would feel better if I didn’t have to use them’ (Wen). Despite this, they saw condom use as the only way to reduce HIV risk.

Participants self-reported high condom use self-efficacy. They negotiated condom use with partners by talking about the potential risks of not using a condom or simply refusing to have sex. Knowing that receptive and insertive anal sex confer different levels of HIV risk, participants reported that their decision on how firmly to insist on condom use sometimes depended on the role they took. Shan explained:

> For me, it’s less unacceptable to have condomless sex if I’m a ‘1’[1]. But if I’m a ‘0’[2] and he’s not willing to use a condom? I would definitely not have sex with him … … If he does not use a condom, I’m not going to let him get close or touch me.”

Participants perceived condomless sex as ‘high-risk’ and viewed individuals who did not use condom consistently as ‘irresponsible’ and ‘morally impaired’. This in turn deterred some men from disclosing their condomless sex behaviour to peers or providers for fear of being judged. Lao Li had had condomless sex with someone whose HIV status he was not sure of, leading him to a local CBO for an HIV test. However, he did not tell the provider that he had condomless sex: ‘If I told them, I worry they’d look down on me and think I’m irresponsible and promiscuous’.

‘Since then, I decided to take control of my own health’: personal experiences impacted the choice of risk management strategy—Participants discussed how personal experiences, either emotional or physical, formed important inputs into decision making about HIV risk management and sexual health. Lao Li recalled acquiring an STI from a trusted partner:

> It was in 2008 … … I tested positive for syphilis. That was my first STI diagnosis. At that time, I only had one partner and thought we were exclusive. So, I went to

[1]·Chinese slang referring to the insertive partner in anal sex.
[2]·Chinese slang referring to the receptive partner in anal sex.

> ask him and found out that it was he who infected me. There was a time we were in different cities. During that time, he had sex with different people every night … … I trusted him too much.

He went on to describe another experience when he worried about HIV after having condomless sex with someone he had met online. Reflecting on these two occasions, Lao Li realised the importance of using his own agency to insist on condom use: 'These are my lessons learnt. Since then, I decided to take control of my own health. I am no longer willing to have unprotected sex with others'.

Like Lao Li, Yao also explained how his experience of STIs had reinforced his insistence on condom use. When he was younger, he had not used condoms consistently and got multiple STIs. The treatment experience was extremely painful: 'That pain, let me tell you, you'll remember that feeling for your whole life'.

> That's why I keep using condoms now. I got infected because I didn't use condoms before … … I became more careful when hooking up by bringing my own condoms and lubricant and by paying close attention to the other person's genitals. I need to check if he has any problem in that area. Since I've caught these diseases, I know what they look like … … if it looks like there is no problem, I will probably have sex with him.

'I Really don't know much about the prevention pill': low awareness and limited experience with biomedical HIV prevention strategies—The majority of participants perceived having sex with individuals living with HIV as a 'high-risk' behaviour. In interview, no one discussed taking HIV medication to suppress viral load as a way for people living with HIV to reduce transmission risk (U = U), and none reported having condomless sex with HIV-positive men whose viral loads were undetectable.

That said, almost all participants were aware of HIV post-exposure prophylaxis (PEP) and had heard of other people using PEP. Two participants had used PEP after having condomless sex with someone whose HIV status they did not know. One participant (Ke) struggled with adhering to the pills, which caused him substantial stress and anxiety. This influenced his subsequent willingness to use PrEP because he felt he was not good at remembering to take medicine.

Among participants who had not used PEP, several individuals described situations in which they could have benefited from PEP. Others viewed PEP as a form of 'morning-after pill' for emergencies and felt that knowing the option existed provided them with an additional way to protect themselves.

At the time of the interviews, PrEP was not approved for HIV prevention in China; however more than half the participants had heard about it. They knew few details, however, and none had used it. Some participants saw PrEP as a potent tool to prevent HIV and expressed interest in it. They discussed the additional benefits PrEP could bring to them, such as decreasing anxiety towards HIV infection and increasing intimacy and pleasure during sex. For example, Wang said:

> It [PrEP use] will definitely be good for my mental well-being …. I will not need to worry about getting HIV if I have high-risk sex. This will make me more relaxed during sex … … and I will enjoy sex more.

However, many people voiced their concern about the potential negative impact PrEP might have on their community. They worried that PrEP might encourage people to be more promiscuous and become more 'irresponsible', suggesting that this might sabotage existing norms around safe sex and monogamy. As Meng shared:

Meng: If these medicines are on the market, then the promiscuity situation among the gay community will become more serious. People will feel that I don't need to worry about HIV infection anymore. Therefore, they will start to blindly have sex with random people … … When these medicines didn't exist, people would hesitate before having sex with random people due to fear of HIV.

Interviewer: If Truvada is available in China, then everyone will be able to protect themselves from HIV infection. At that time, in your opinion, what's the problem with promiscuity? Meng: To me, it is a moral issue. No matter in the homosexual or heterosexual community, there are people who are disloyal in their relationships. This is not 1940s or 1950s anymore. People are more and more open-minded. However, I still believe in monogamy.

Discussion

This study addresses the current lack of qualitative data on HIV risk management among sexual minority men in China. Consistent with previous research, findings demonstrate that individuals' approach to HIV risk management is multifaceted, nuanced and dependent on context and relational factors (Flowers 2001; Grace et al. 2014). Although many risk management strategies (e.g. assessing the risk of potential partners) used by participants have been reported among sexual minority men in other contexts (Adams and Neville 2009; Neville and Adams 2016), our examination of the social context and men's lived experiences identified unique perspectives central to understanding the population and guiding the implementation of new HIV prevention interventions.

Sexual minority men in our sample reported strong fear of and close proximity to HIV. To protect themselves from the imminent threat of HIV, many men internalised fear and became highly suspicious of other men in the community. This approach has been found in other high stigma, high HIV prevalence contexts (Denson et al. 2019). In this study, this self-protection strategy facilitated men's distrust of other sexual minority men who were often seen as the potential transmitters of HIV, contributing to the compromised sense of community shared by interviewees.

Shared distrust was further exacerbated by men's criticism of 'promiscuous' men in the community. While promiscuity may be a common stereotype of gay and bisexual men in many settings, this 'othering' of men seen as promiscuous reflects the broader contexts context in China. As our participants pointed out, lack of social and structural support for same-sex couples made it extremely difficult to maintain long-term relationships, resulting

in shorter-term partnerships and more frequent partner change. This, together with the presence of community norms concerning monogamy and safe sex, may have contributed to participants' construction of the community's promiscuity 'problem'. Future HIV prevention needs to take this context into account when designing strategies to help clients cope with minority stressors and navigate HIV risk.

Study findings suggest that sexual minority men's choice of HIV risk management is strongly influenced by norms around condom use, echoing findings from previous studies among Asian sexual minority men in other countries (Adams et al. 2019). In our interviews, study participants were adamant they always used condoms when having sex, but behavioural data from the accompanying quantitative survey collected after the interviews revealed inconsistencies. This is not surprising given that '100% condom use' was one of the earliest and most influential approaches to HIV prevention among key populations in China. Within this approach, condomless sex was labelled as 'unsafe' and 'high risk'. Our data show how this stigmatised messaging of labelling condomless sex as 'risky' has been internalised and projected on to other members of the community.

The stigmatisation of condomless sex described above further influenced participants' perceptions of PrEP, as many worried that the introduction of PrEP would undermine current norms around 'safe sex' and exacerbate promiscuity within the community. A recent qualitative study of sexual minority participants in the first PrEP trial in China showed that PrEP-related stigma (e.g. concerns about disclosure and worry about being labelled as 'promiscuous') posed a barrier to uptake (Liu et al. 2018). Developing interventions to address PrEP-related stigma will be critical to successful PrEP implementation in China.

However, community norms are constantly changing, and the introduction of new forms of HIV prevention may lead to a reshaping of community norms (Flowers 2001; Montess 2020). In settings where PrEP use has become more mainstream, researchers have observed shifting attitudes towards PrEP and changing community norms among sexual minority men (Gómez et al. 2020). Sexual minority men have embraced PrEP for its HIV prevention and psychological benefits (Quinn et al. 2020). Notions of 'safe sex' have changed and condomless sex is no longer viewed as an irresponsible high-risk act but as a liberating experience that enables meaningful connection free of HIV risk between serodiscordant partners (Klassen et al. 2019; Skinta, Brandrett, and Margolis 2020). As PrEP begins to be rolled out in China, research is needed to examine how PrEP introduction impacts existing beliefs and community norms.

Finally, our findings suggest that men's decisions about how to manage HIV risk were influenced by a variety of factors (e.g. norms, personal experience, perceptions of partner's risk), and decision-making was often implicit and based on instinct. This aligns with the Dual-Process model of decision making, which suggests that the choice one makes is driven by two processes: the first of these affective, quick and based on gut feelings; and the second, which is more deliberative, rational and slow (Evans and Stanovich 2013). Recent reviews of decision making on PrEP modalities have shown that current development of PrEP products has largely ignored second system attributes (Bauermeister, Downs, and Krakower 2020; Meyers, Price, and Golub 2020). Since there exists no single best strategy

for HIV risk management, the choice between different strategies is preference-sensitive: decisions about which strategy to use often reflect clients' personal values and preferences (Elwyn, Frosch, and Rollnick 2009). With the introduction of PrEP in China, more research is needed to understand the dual-process of decision making in HIV risk management to create culturally-appropriate decision aids that allow sexual minority men to choose the prevention methods that work best for them.

Limitations

There are some limitations to this study. First, HIV risk management was not the primary focus of the parent study. So, the level of probing or follow-up regarding HIV risk management was different between interviews, resulting in variations in richness of data. Second, similar to other countries, geo-social networking applications play an important role in the social life of Chinese sexual minority men. We did not include questions related to this and may have missed information about how men manage their HIV risk in the context of geo-social networking apps. Finally, we used a purposive sampling strategy in five cities in China. We randomly selected five transcripts from each city for analysis. The findings drawn from our analysis may be unique to this specific sample and may not be readily transferable to sexual minority men in other settings.

Conclusion

This study has characterised the social context and lived experience of HIV-uninfected sexual minority men as they seek to manage HIV risk in China. Findings reveal the intervention context for future HIV prevention programmes and point to key factors that need to be taken into account in future efforts to promote effective HIV prevention among sexual minority men.

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Table 1.

Sample characteristics.

Name	Age	Sexual identification	Highest level of education	Income level	Marital status
Shi	18	Gay	College	High	Single
Di	21	Queer	High school	Low	Single
Cui	22	Gay	College	Medium	Single
Tao	24	Gay	Above college	Low	Single
Dong	25	Gay	Above college	High	Single
Fang	25	Gay	College	High	Single
Shan	25	Gay	College	Low	Single
Yi	26	Gay	Above college	Low	Single
Tong	27	Gay	College	High	Single
Wen	27	Gay	High school	High	Single
Yang	28	Gay	High school	High	Single
Meng	29	Gay	College	High	Single
Longlong	29	Gay	College	High	Single
Le	30	Gay	College	High	Single
Ming	30	Bisexual	College	High	Single
Gu	32	Gay	College	High	Single
Wei	34	Gay	College	Low	Single
Yao	35	Gay	College	High	Single
Lin	40	Gay	Middle school	Medium	Divorced
Lao Li	43	Gay	High school	Medium	Single
Hao	44	Bisexual	College	High	Married
Zhou	45	Gay	College	Low	Married
Zhao	47	Gay	College	High	Married
Wang	50	Bisexual	High school	High	Divorced
Ke	53	Gay	College	High	Single

Note: income level is categorised based on monthly income. Low: less than 5,000RMB (US$714); medium: 5,000 to 10,000 RMB (US$714 to 1,429); high: more than 10,000 RMB (US$1,429).