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Overcoming HIV stigma? A qualitative analysis of HIV cure research and stigma among men who have sex with men living with HIV

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Abstract

Despite global progress in HIV stigma reduction, persistent HIV stigma thwarts effective HIV service delivery. Advances in HIV biomedical research towards a cure may shift perceptions of people living with HIV and HIV stigma. The purpose of this study was to examine how men who have sex with men (MSM) living with HIV in Guangzhou, China perceive HIV cure research and its potential impact on MSM and HIV stigma. We conducted in-depth interviews with 26 MSM living with HIV about their perceptions of HIV cure research and the potential impact of an HIV cure on their lives. Thematic coding was used to identify themes and structure the analysis. Two overarching themes emerged. First, participants stated that an HIV cure may have a limited impact on MSM-related stigma. Men noted that most stigma towards MSM was linked to stereotypes of promiscuity and high rates of sexual transmitted diseases (STDs) in the MSM community and might persist even after a cure. Second, participants believed that an HIV cure could substantially reduce enacted, anticipated, and internalized stigma associated with HIV. These findings suggest that a biomedical cure alone would not remove the layered stigma facing MSM living with HIV. Comprehensive measures to reduce stigma are needed.

Keywords

HIV cure; HIV-related stigma; Qualitative study; MSM; China

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Introduction

Stigma is a discrediting attribute that decreases the social status of an individual who possesses it (Goffman, 1963). For those living with HIV, the stigma they face derives from multiple factors, such as misconceptions about the disease and its transmission, fears of contagion, and negative portrayal from the media (Aggleton, Wood, Malcolm, & Parker, 2005; Mahajan et al., 2008). The stigma experienced by people living with HIV (PLHIV) is also rooted in pre-existing marginalized behaviors and identities, such as sex work or drug use (Parker & Aggleton, 2003). As a result, PLHIV can experience another layer of stigma in addition to the stigma caused from their HIV status (Aggleton et al., 2005; Earnshaw, Bogart, Dovidio, & Williams, 2013).

In order to describe the impact of these larger structural and societal forces on an individual's experience of HIV-related stigma, Earnshaw and Chaudoir proposed a HIV stigma framework. Within their framework, HIV stigma is differentiated into internalized, enacted, and anticipated. Internalized HIV stigma is an individual's own negative feelings about themselves due to their HIV status. Enacted stigma refers to an individual's lived experience of stigma while anticipated stigma refers to an individual's expectation that others will stigmatize an individual due to their HIV status (Earnshaw & Chaudior, 2009).

Much like HIV stigma, sexual stigma can also be conceptually viewed as internalized, enacted, and felt stigma (with felt stigma being similar to anticipated stigma). Sexual stigma encompasses the negative attributes that a culture places on nonheterosexual identities and behaviors (Herek & McLemore, 2013).

Understanding the conceptual frameworks of both HIV and sexual stigma is important for understanding the experiences of men who have sex with men (MSM) living with HIV. MSM living with HIV face marginalization and a multi-layered stigma that encompasses stereotypes about sexual orientation (H. Liu, Feng, Rhodes, & Liu, 2009; J. X. Liu & Choi, 2006; Neilands, Steward, & Choi, 2008) and HIV (Chong, Mak, Tam, Zhu, & Chung, 2017; Jeffries IV et al., 2015). MSM in China still lack full civil rights (H. Liu et al., 2006; Wu, 2003). Many MSM in China report facing discrimination and negative stereotypes based on their sexual orientation (Hua et al., 2014; J. X. Liu & Choi, 2013; United Nations Programme on HIV/AIDS). While anti-discriminatory policies are gradually improving (General Office of the State Council of the People's Republic of China, 2006), institutionalized discrimination remains prevalent, with PLHIV ineligible to become civil servants (United Nations Programme on HIV/AIDS). Thus, as both an MSM and a person living with HIV in China, this group faces substantial stigma (Xu, Sheng, Khoshnood, & Clark, 2017).

The strong emphasis on familial piety and obligations in Chinese culture may add to the stigma because MSM living with HIV face greater challenges in fulfilling traditional family expectations (Steward, Miege, & Choi, 2013). As MSM, they are unable to produce offspring to continue the family lineage (J. X. Liu & Choi, 2006; Wang, 2011). As individuals living with HIV, their health is viewed as a detriment towards fulfilling filial obligations and supporting their aging parents (H. Wei & Zhong, 2016). In addition, HIV

infection is seen as proof of the depravity or deviance of sex between men (J. X. Liu & Choi, 2006). Living as part of a minority group in an environment with cultural pressures and negative stereotypes can result in chronic stress, often referred to as minority stress (Brooks, 1981; Meyer, 1995). MSM living with HIV in China also develop significant levels of internalized stigma that manifests itself in concealment of HIV status and extends into negative stereotypes about their own group, which are MSM living with HIV (J. X. Liu & Choi, 2006; Xu et al., 2017).

HIV-related stigma has been shown to be associated with poor engagement in HIV prevention and treatment services in many settings (Kalichman & Simbayi, 2003; Liamputtong, 2013; J. X. Liu & Choi, 2006; Mahajan et al., 2008; C. Wei et al., 2014). The advent of new biomedical interventions has inspired hope that HIV stigma could be reduced (Chambers et al., 2015; Mall, Middelkoop, Mark, Wood, & Bekker, 2013; Sawires et al., 2007; Wolfe et al., 2008). Biomedical interventions may address some of the factors contributing to stigma, such as fear of infection and lack of understanding of HIV (Jürgensen, Sandøy, Michelo, Fylkesnes, & ZAMACT Study Group, 2013; Mall et al., 2013). However, biomedical interventions alone will unlikely eliminate stigma (Maughan-Brown, 2010; Roura et al., 2009). The effectiveness of biomedical interventions in reducing stigma will require an understanding of structural factors and the social environment that shape HIV stigma (Aggleton, 2007; Roberts & Matthews, 2012; Roura et al., 2009).

In recent years, curing HIV has become a priority within HIV research (Deeks et al., 2016; Lewin, 2013). HIV cure refers to complete eradication of HIV from the body, while remission refers to lack of viremina in the absence of ART. HIV cure and remission research have accelerated in recent years (Passaes & Sáez-Cirión, 2014). The possibility of an HIV remission could impact stigma, given that incurability is cited as one factor contributing to HIV stigma (Aggleton et al., 2005). Previous qualitative research in China with people who inject drugs and MSM have found that hope for an HIV cure may facilitate HIV testing and linkage to services (Chu et al., 2015; C. Wei et al., 2014). It therefore becomes important to understand the potential impact of HIV cure on the social phenomenon of HIV stigma. The social environment that impacts stigma will also shape and influence the effectiveness of biomedical interventions.

Existing HIV cure social science has emphasized the ethical conduct of trials (Peay & Henderson, 2015), the impact on PLHIV's identity in society (Ma et al., 2016), and interactions with health care systems (Chu et al., 2015). However, few directly address the impact of an HIV cure on stigma. Thus, we sought to examine perceptions of how HIV cure may influence stigma through a qualitative study. We chose to focus on MSM living with HIV, given that they are a population affected by multilayered stigma. We hypothesized that the possibility of an HIV cure or remission would not overcome stigma associated with MSM or HIV identities, but may decrease some of the layered stigma experienced by this group. Our aim was to examine how MSM living with HIV in Guangzhou, China perceive the possible impact of HIV cure on HIV and MSM stigma.

Methods

Participants

During September to November 2015, we recruited a purposive sample of participants (Bernard, 2011) in equal numbers from two settings in Guangzhou, China: 1) Guangzhou Tongzhi (Tongzhi means “comrade,” a euphemism for MSM), a well-known community-based organization (CBO) providing HIV testing and counseling to MSM in the city; 2) the Guangzhou Eighth People’s Hospital, the largest infectious diseases hospital and a key provider of HIV treatment in Guangzhou. Men were eligible for this study if they were 18 years or older, reported ever having had sex with men, and were diagnosed with HIV. We refer to men who have sex with men as MSM in this manuscript becasue few MSM in China self-identify as gay or bisexual (He et al., 2017; Li, Holroyd, & Lau, 2010; Zhou, 2006).

We recruited 26 participants who met the eligibility requirements and were willing to participate. Most were young (22–51 years old; M=29.7; SD=6.94), never married (n=23; 88%), considered themselves either homosexual (n=24; 92%) or bisexual (n=2; 8%), and had a high school education (n=7; 15%) or higher (n=15; 58%) (Table 1). Their average annual salary was 19,098 US dollars or 131,423 Chinese yuan (range 5,700–87,500 USD; median=11,400 USD). Thirteen men were recruited from the CBO and 13 men were recruited from the clinic. The majority of men recruited from the CBO (n=12; 92%) were recently diagnosed and had not yet started on antiretroviral therapy (ART). Most men recruited from the hospital (n=11; 85%) were on ART.

Procedure

We adapted a semi-structured, in-depth interview guide used for previous HIV cure research in Guangzhou. This previous interview guide focused on how PLHIV perceived HIV cure in relation to ART and their HIV identity (Ma et al., 2016). Questions were revised to elicit the specific challenges facing MSM living with HIV in China. The revised interview guide collected data on their experiences of stigma associated with HIV and MSM, their perceptions of HIV cure research, and the potential impact of an HIV cure on their lives. We conducted pilot interviews with three MSM who were not included in the recruitment sample to pretest the interview questions. Interviews were conducted by three trained interviewers fluent in Mandarin. The interviewers were trained qualitative researchers. Two were male and one was female.

At the hospital, two physicians assisted with participant recruitment. At the end of outpatient clinic consultation, if prompted by the physician, the interviewers provided the patient with verbal and written information about the project, interview process, and confidentiality measures. At the CBO, CBO staff were provided with a brief sheet outlining the project and confidentiality measures, and at the end of testing or counseling, they asked patients if they were willing to participate in the research study.

Interviews were conducted in a private, quiet room and ranged from 30 to 70 minutes. Interviewees were asked if they were comfortable with the interview being audio recorded and the interviewer taking handwritten notes. All interviewees agreed. Among individuals who had limited understanding of HIV cure, we briefly explained basic concepts and cited

some notable cases of patients who achieved HIV cure (i.e., Timothy Brown) (Hütter et al., 2009) or achieved HIV remission (e.g., the Mississippi child) (Persaud et al., 2013).

After completing the interview, each participant received a phone card worth 100 RMB (approximately $15 USD) for their participation. The digital audio recordings were transcribed and checked for accuracy immediately after each interview. The University of North Carolina at Chapel Hill Institutional Review Board (IRB) and Guangzhou Eighth People's Hospital IRB approved this study.

Data Analysis

Audio-recorded interviews were conducted in Chinese and were transcribed verbatim. Transcripts were analyzed in Chinese using a thematic coding method that allowed us to test emerging themes against theoretical literature (Glaser, 1992). In particular, we focused on how our findings were consistent with and contrary to the existing literature on stigma and on how emergent themes revealed the relationship between perceptions of HIV cure and stigma associated with HIV and MSM.

We coded using grounded theory (Strauss & Corbin, 1998). We adapted an HIV stigma framework (Earnshaw & Chaudior, 2009) to code the types of stigma that MSM experienced: enacted, anticipated, and internalized.

Two researchers independently conducted the coding using NVivo 11. A codebook with definitions for each code was developed by three individuals and became the basis for subsequent coding. Discrepancies were resolved based on a discussion and examination of the codebook. Based on the results of coding analysis, researchers identified quotes from the interview transcripts that were salient examples of the coded themes.

Results

In the interviews, participants reported experiences of being excluded by both family and society, workplace discrimination, feeling inferior, and psychological distress. Two prominent themes related to HIV cure emerged. These themes were: 1) HIV cure would have a limited impact on MSM-related stigma and 2) HIV cure would substantially reduce enacted, anticipated, and internalized HIV-related stigma.

HIV Cure and MSM-related Stigma

Associations between HIV and homosexuality—Most men observed that both HIV and homosexuality are seen as marks of abnormality and immorality in China. As a result, some participants believed that having both highly stigmatized identities heightens the one's perceived immorality. One participant stated: "I think people believe that HIV-positive gay men are doubly guilty" (Participant 24, recruited from the hospital, 27 years old).

Furthermore, as seen with HIV in the past and around the globe, participants indicated there were misconceptions that HIV is primarily or only a disease that afflicts gay men. Some participants stated that part of the misconceptions stem from recent public health messages disseminated by the media and others, which have accentuated the association between

homosexuality and HIV. However, sometimes the association has not been interpreted as a correlation, but rather as causation with the primary cause resulting from gay sexual behavior. As one participant put it:

> In recent years the publicity is mainly focused on sexual transmission. When it comes to sexual transmission, the high HIV prevalence among the gay population is mentioned frequently. While this is true, people don't take time to explain why HIV infection is so prevalent among gay men …. This view [that gay men have a high HIV prevalence] changed into the concept that only gay men can spread HIV while heterosexuals cannot … Some believe that HIV will be transmitted if gay men engage in sexual behavior whether or not the individual carries HIV. In their minds, this disease is produced by gay sexual behaviors but not by HIV. (Participant 26, recruited from the hospital, 26 years old)

As a result, these misconceptions and condemnations contribute to participants perceiving a multi-layered stigma for MSM living with HIV and the feeling that they are "doubly guilty."

Impact on HIV cure on MSM-related stigma—The implicit association in the general population between HIV and MSM may initially suggest that curing HIV would help to reduce MSM-related stigma. But while there was general consensus and optimism among participants about the potential effects of HIV cure on reducing HIV-related stigma, many were pessimistic about the influence of an HIV cure on MSM-related stigma: "With regard to curing HIV, it may impact people's views of HIV. People would probably not fear it so badly, but, on the other hand, sexual prejudice will remain the same" (Participant 12, recruited from the CBO, 23 years old).

Some articulated that from their point of view, HIV cure would do little to reduce MSM-related stigma because MSM-related stigma has deeper social and cultural determinants. These social and cultural determinants include traditional morality and the inability to procreate as a MSM. For some participants, they viewed the HIV epidemic as exacerbating the pre-existing MSM-related prejudices. A few even perceived as MSM-related stigma as the predominant factor underlying the complex, multi-layered stigma faced by MSM living with HIV.

> Gay people were disliked even before HIV existed. The reason people don't like gay men is that many people just don't like them. With this disease, HIV can be used as evidence to certify that gay men are abnormal and that HIV is a self-earned infection. HIV becomes an excuse for discriminating against gay men. (Participant 22, recruited from the hospital, 39 years old)

Thus, the perception that HIV cure would have limited impact on MSM-related stigma could stem from some MSM believing that MSM-related prejudices are more deeply entrenched.

Reduction of HIV-related Stigma

Return to normalcy with HIV cure—Sixteen participants believed that an HIV cure would greatly decrease HIV-related stigma, leading to improved quality of life and a return to normalcy:

> Yeah… can be restored to the original, that's the best situation. It's just the social side of things. But if [HIV cure] was real, that this disease could be cured, and that was known in society, really, I believe that … there wouldn't continue to be discrimination. Because it would be a curable sickness. (Participant 7, recruited from the CBO, 25 years old)

The reduction in HIV-related stigma can be conceptualized through the HIV stigma framework (Earnshaw & Chaudior, 2009), with differentiation between enacted, anticipated, and internalized stigma. Table 2 shows a summary of our identified themes categorized by the type of stigma.

Enacted stigma: barriers to living a normal life in China—Enacted stigma is the actual discrimination that people living with HIV experience (Earnshaw & Chaudior, 2009). Many of these men perceived both formal and informal barriers for the engagement of people living with HIV in normal life in China. Some participants remarked upon one of the notable formal barriers, which is the consideration of HIV status in employment decisions in China. Two participants reported that they were forced to quit their applications for government positions after being diagnosed with HIV.

> In regards to HIV, it has definitely had a huge effect on society, such as seeking a job in the labor market. Now the civil servants have their formal physical examination standards. […] The government has only published physical examination requirements for civil servants. Many work units, as well as some businesses, use those standards for reference, which increase our (HIV infected individuals) difficulties in securing a job. We all know, public sector, such as civil servant work units, enterprises, and institutions, represent a huge number of available positions. (Participant 26, recruited from the hospital, 26 years old)

Participants agreed that an HIV cure would render these more overt forms of stigmatizing policies obsolete. As one participant put it:

> A number of my rights and interests, including in career, daily life, and other areas would be more secure [in the event of an HIV cure]. Right now, even though our country has clear laws protecting HIV patients' career and educational rights and interests, in reality, there is still a lot of resistance in this society. (Participant 26, recruited from the hospital, 26 years old)

Anticipated stigma: fear of stigma impacting relationships—Anticipated stigma is the expectation or fear of being treated unfairly due to one's HIV status (Earnshaw & Chaudior, 2009). Many participants noted that the fear of being stigmatized, based on bad experiences or perceptions of social and cultural norms, led many participants to carry a heavy psychological burden and alter their activities or behaviors. Some people opined that an HIV cure could enable reintegration into society: "From my perspective, if [HIV] could be cured, it would be a huge psychological comfort, I feel it could allow me to better re-assimilate into this society's normal life" (Participant 3, recruited from the CBO, 28 years old).

Anticipated stigma also had a significant detrimental impact on interpersonal relationships for participants. Participants expressed fears of rejection and negative responses, which served as a deterrent to pursuing romantic relationships. If a relationship is undertaken and serostatus is hidden, participants constantly feared unintentional disclosure that will lead to eventual rejection. An HIV cure would restore the opportunity for romantic relationships for many of these men: "If I could be cured, then I could have confidence to stay with a boyfriend. Without the possibility of a cure…the feelings of guilt and inferiority cannot be offset. They are hard to offset" (Participant 3, recruited from the CBO, 28 years old).

The perceived benefits of an HIV cure would not be limited to romantic relationships among study participants. MSM living with HIV voiced fears of rejection by friends and family due to their HIV status. As a result, once again, participants stated that they avoided unintentional disclosure in conversations with others. An HIV cure would improve non-romantic relationships by reducing the anticipated stigma and rejection:

> Currently it is a very big trouble for me to have deep conversations with others since deep conversations involve every aspect of me. But in terms of health issues, I have to lie to them. I don't want to lie, so I really hope that this would be the first thing that would change [after being cured]. (Participant 5, recruited from CBO, 22 years old)

Many participants feared discrimination by others because a perceived lack of understanding of HIV among the general population has led to an intensified fear of PLHIV. While the exaggerated phobia of HIV is likely multi-faceted, turning HIV into a curable disease could help reduce some of the anticipated stigma stemming from the general population's fear of HIV. One participant stated, "If it were a curable sickness, if it were similar to the common cold and could be cured [people wouldn't discriminate]. Do people discriminate against people with colds?" (Participant 7, recruited from CBO, 25 years old).

Internalized stigma: perceiving self as inferior—Internalized stigma refers to having a stigmatized identity, accepting society's discriminatory attitudes, and manifesting those beliefs towards oneself (Earnshaw & Chaudior, 2009; Herek & McLemore, 2013; Quinn & Chaudoir, 2009). Many participants expressed feelings of inferiority compared to those around them and described their HIV status as a sign of uncleanliness and contamination on a fundamental level. Some participants had even gone as far as to cease sharing meals with family and friends out of shame or for fear of infecting their loved ones despite knowing that they cannot transmit the virus to them through food.

> The doctor told me that eating with others will not infect them, so I was very relieved. However, I still control myself because my brother has kids and the kids love to be around me. Even when eating, they will be around me. So right now, I try to avoid using my own chopsticks to give them food. Before I knew that I was sick, I sometimes would use my own chopsticks to give them some vegetables or meet on their plates. Right now, if I can try to avoid, then I do not touch as much as possible. (Participant 14, recruited from CBO, 25 years old)

An HIV cure may be thought to reduce internalized stigma by decreasing the sense of self-guilt, fear of disclosure, fear of transmission, and the need for regular medication.

Interviewees who expressed that hope speculated that HIV cure would remove this self-recrimination and self-imposed inferiority and allow men to re-engage fully with those close to them. Additionally, the need for regular medication was cited as a constant reminder of one's HIV status and served to intensify self-directed feelings of stigma; the cure was cited as a solution to this problem. As one participant said:

> Taking medication, in itself, is a burden to oneself. You normal people don't have to take this medicine, and it's just a little bit more normal [than our patients]. If after taking this cure, I don't have to continue taking medication, I could live like a normal person again. (Participant 20, recruited from the hospital, 29 years old)

Here, the participant clearly perceives himself as abnormal due to his need for regular medication. An HIV cure may alleviate the external reminders of illness, such as treatment and medication, and thereby reduce internalized stigma.

Skepticism over the impact of HIV cure on HIV stigma—While many participants were optimistic about the impact of cure over different aspects of HIV stigma, a few indicated skepticism and pessimism. Those participants stated that curing HIV would have similar effects to that of other diseases that have been curable for years yet related stigma and discrimination still exist.

> [HIV] cure would be similar to syphilis being curable, however it doesn't mean that there wouldn't still be issues surrounding morality or… people might say you can be cured, but you were infected with this disease, so I think, in terms of your virtues, I stand tall and look down at you. I think you have some moral issues, so, really, a cure wouldn't change that much. (Participant 24, recruited from the hospital, 27 years old)

In this example, the participant uses syphilis as an example of a curable disease that continues to be stigmatized due to its association with morality. Some participants believed that individuals infected with sexual transmitted diseases (STDs), like syphilis, become discredited because of their perceived abnormal and immoral practices. Likewise, because HIV can be sexually transmitted and has moral implications associated with infection itself, these participants anticipated that a HIV cure would have minimal impact on HIV-related stigma.

Discussion

We found that MSM living with HIV in Guangzhou, China experienced multi-layered stigma related to their HIV status and their MSM identity. Our qualitative data suggest that from their point of view, an HIV cure would more directly influence HIV-related stigma, not the additional layer of MSM stigma or the synergistic layer of MSM/HIV stigma. Treatment optimization will likely continue to make it increasingly easy for people living with HIV to achieve viral suppression, changing social perceptions and implications of an HIV cure.

Some have expressed hope that HIV stigma would vanish with HIV cure because once the condition is curable, negative perceptions of HIV would disappear and individuals living with HIV could stop experiencing stigma, simply by escaping HIV (Buell et al., 2016; Choi,

Steward, Miege, Hudes, & Gregorich, 2016; Chu et al., 2015). A majority of our MSM interviewees expressed similar optimism about the impact of an eventual HIV cure on HIV-related stigma. Most were convinced it would reduce both their experiences of HIV-related discrimination and their feelings of guilt and inferiority. As one interviewee put it, “if a cure were possible, that would be great. I would be able to live just like a normal person that I used to be.” Some interviewees believed that the stigma of HIV arose in part out of fear of HIV’s incurability and that removing this fear would reduce HIV-related stigma. An interviewee expressed hope that “if there were a cure, if [HIV] weren’t that serious, if [HIV] weren’t that dreaded, if [HIV] weren’t that feared, then maybe it could be accepted by everyone.”

While HIV stigma may abate, participants expressed that stigma against MSM would likely endure. Most participants were firm in their conviction that the stigma associated with homosexuality was shaped by social and cultural concerns and HIV cure would do little to impact that layer of stigma. This is consistent with persistent in-group MSM stigma based on serostatus that has been noted in other qualitative HIV research in China (Chong et al., 2017). MSM living with HIV who are facing stigma now may continue to experience MSM-related stigma, independent of the curability of HIV.

Furthermore, HIV-related stigma has an exacerbating and enhancing effect on the collective MSM stigma, contributing to a synergistic layer of MSM/HIV stigma. Participants stated that HIV has been perceived as punishment and proof of MSM’s social deviance. One interviewee described HIV as a “testimony to certify that gay men are abnormal and HIV infection of gay men is self-earned.” Our participants’ perception of the synergistic layer of MSM/HIV stigma parallels findings in the United States in the early 1990s, when some individuals’ negative attitudes towards gay and bisexual men were used to justify sexual prejudice and negative attitudes to people with HIV (Herek & Capitanio, 1993; Herek & Glunt, 1991). For individuals, the synergistic stigma need not disappear once they are cured of HIV. The example of other STDs, such as syphilis, demonstrates how curing the STD may not influence the underlying stigma (Lichtenstein, 2003). As one interviewee described, “[HIV] cure would be similar to syphilis being curable … people might say you can be cured, but you were infected with this disease, so I think, in terms of your virtues… I think you have some moral issues.”

These findings have implications for policy and research. First, we found that multiple layers of stigma profoundly influenced our participants’ lives. This suggests the need to develop interventions to reduce stigma among key populations living with HIV that go beyond addressing HIV-related stigma. This research underscores the importance of expanding existing social interventions directed at improving health care accessibility, particularly those aimed at reducing sexual prejudice. If a method for achieving HIV remission is developed, there will be a continued need for social interventions since our data suggest that a HIV remission will have a limited impact on other layers of stigma, such as MSM-related stigma. Second, those developing stigma-reduction campaigns could consider including information about the current state of HIV cure/remission research. Despite the early stage of research towards a cure, people may find HIV less burdensome when it is no longer definitively incurable. This would need to be cautiously worded and scientifically based, but

could help inspire new thinking about HIV. Third, this research suggests the need for further anthropological research on perceptions of HIV cure. Many perceptions of MSM were embedded within local contexts and social identities. Further understanding of the meaning of HIV cure in other contexts will be important. Finally, this study highlights the complexity of stigma as it is experienced by MSM living with HIV in China. Stigma is not a simple concept and requires further research to better understand how it is experienced and understood.

This study has several limitations. First, it was an exploratory qualitative study. Study participants were recruited through a convenience sample, and do not represent a diverse range of socio-demographic characteristics. Thus, our findings should be interpreted cautiously in other settings. Second, some of our interviews were brief, which can have an impact on how deeply we are able to probe on those participants' experiences and challenges. However, the majority of our interviews were of sufficient duration and included rich narratives. Third, the early stage of research towards a cure makes much of these discussions hypothetical. We gathered as much detail about the lived experience of MSM stigma and used standardized descriptions of ongoing HIV cure research to anchor discussions. Fourth, we only analyzed perceptions by MSM living with HIV, which excludes valuable perspectives from their family members, friends, and care providers. Fifth, stakeholder perceptions about a potential future HIV cure are inherently uncertain, given the early state of the science. Sixth, much of the cure-related work currently being pursued is on HIV remission and not a sterilizing cure. Participants were given educational materials on both sterilizing cure and remission, but it is uncertain to know how the participants processed the information and interpreted the concept of cure in their responses. Seventh, we did not examine the relationship between criminalization and perceptions of HIV stigma. China does not criminalize homosexuality and this theme did not appear in our interviews. Finally, in our interviews, we did not focus on gay identity, although this may impact their responses and may influence how MSM perceive MSM stigma. In spite of these limitations, studies examining the impact of an HIV cure on stigma form a necessary and a significant step in developing stigma-reduction interventions.

Conclusion

As HIV cure research advances, it becomes increasingly important to understand not only the potential biomedical outcomes of cure research but also the social and cultural impact that an HIV cure might have. In this qualitative study, our participants believed that HIV cure may greatly lessen the stigma associated with HIV. On the other hand, persistent layered and synergistic stigma towards MSM living with HIV cannot be stemmed by a biomedical cure alone. While HIV cure research would decrease stigma associated with HIV, comprehensive measures are needed to identify and develop effective strategies to alleviate both HIV and MSM stigma.

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Table 1

Demographic characteristics of interviewees (n=26)

Demographic characteristics	Number
Age	
20–29	17
30–39	7
40–49	1
50–59	1
Education Level	
Middle school	1
High school	7
Associate's Degree	3
Undergraduate	10
Master's Degree	2
Unknown	3
Income (USD/year)	
Median	$11,400
Minimum	$5,700
Maximum	$87,500
Unknown	3
Partner/Marital status	
Single	16
Partner	7
Married	1
Partner/Married[a]	2
Recruitment location	
CBO	13
Hospital	13
ART status at time of interview	
Taking ART	12
Not taking ART	14

[a]Is married and also has a partner

Table 2

Impact of HIV cure on enacted, anticipated, and internalized HIV stigma

	Impact of HIV cure
Enacted stigma	Currently MSM living with HIV in China perceive formal and informal barriers preventing them from living a normal life. Many participants believed a HIV cure would remove these barriers.
Anticipated stigma	Participants expressed hope that HIV cure would alleviate fears of being stigmatized. These fears include: • Fears of rejection by romantic partners, friends, and family • Fears of stigmatization by others due to 1) previous bad experiences and 2) perceived lack of understanding among general population
Internalized stigma	MSM living with HIV described feeling contaminated and unclean due to their HIV status and believed that a HIV cure could reduce these internalized feelings.