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Preferences and access to community-based HIV testing sites among men who have sex with men (MSM) in Côte d'Ivoire

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ABSTRACT

Objective Measuring access and preferences to Men who have Sex with Men focused community-based HIV testing sites (MSM-CBTS) in Côte d'Ivoire.

Design A respondent-driven sampling telephone survey.

Setting National survey conducted in 2018 in Côte d'Ivoire.

Participants 518 MSM aged over 18 years old.

Primary and secondary outcome measures Knowledge, practices, satisfaction and preferences regarding MSM-CBTS. Factors associated with MSM-CTBS access or knowledge and with HIV testing venue preferences were examined.

Results Only half of the respondents (47%) reported knowing of an MSM-CBTS. Of these, 79% had already attended one. Both knowing of and ever visiting an MSM-CBTS were significantly associated with a higher number of HIV tests performed in the past 12 months and having disclosed sexual orientation to one family member.

In terms of preferences, 37% of respondents said they preferred undifferentiated HIV testing sites (ie, 'all patients' HIV testing sites), 34% preferred MSM-CBTS and 29% had no preference.

Those who reported being sexually attracted to women, being bisexual and those who did not know an MSM non-governmental organisation were less likely to prefer MSM-CBTS. MSM who preferred undifferentiated HIV testing sites mentioned the lack of discretion and anonymity of community-based sites and the desire to avoid the gaze of others.

Conclusion Community-based HIV testing is well suited for MSM who identify as homosexual and those close to the MSM community, while maintaining undifferentiated HIV testing is essential for others. Both types of activities need to be maintained and developed. Healthcare professionals in undifferentiated HIV testing sites need to be properly trained in the non-judgemental reception of MSM.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ This is the first respondent-driven sampling (RDS) survey where both the peer recruitment and the interview were conducted by phone.
⇒ The survey included various types of men who have sex with men (MSM), including those who lived far from the big cities.
⇒ Analysis has considered the RDS design of the study.
⇒ Seeds were selected from MSM non-governmental organisations, which may have caused selection bias.
⇒ Like other RDS methodologies, our survey failed in recruiting older MSM.

INTRODUCTION

Worldwide, key populations such as men who have sex with men (MSM) carry a major burden in the HIV epidemic.[1] In addition to behavioural factors, they face situations that make them more vulnerable to HIV infection, such as stigmatisation.[2 3] MSM are more likely to be stigmatised by other patients and healthcare professionals, excluded from health services, unable to speak freely about their sexual practices or misunderstood in medical consultation.[4–6] These situations explain why some MSM avoid health facilities and are not frequently tested for HIV.

To enhance access to HIV testing among MSM, community-based HIV services for MSM have been advocated by the WHO.[1] These services are designed to be non-stigmatising and MSM-friendly areas where professionals are specifically trained to welcome and care for MSM audiences. Most of these places are supported by community-based non-governmental organisations (NGOs) and promoted by peer educators who are trained in the use of rapid HIV tests. These venues enable MSM to experience an environment frequented by their peers where they can express themselves freely.[7 8] Moreover, several studies show that testing in

MSM-specific community venues can reach highly HIV-exposed MSM.[9–12]

Despite their benefits, MSM-focused community-based HIV testing sites (MSM-CBTS) may not be accessible or suitable for all MSM populations. MSM who have male-only sexual relationships are more likely to attend MSM-CBTS than other MSM populations.[13 14] Other studies suggest that attendance at different healthcare and testing venues varies according to the sexual orientation or identity reported by MSM.[15 16] However, there is a paucity of data on MSMs' perspective regarding testing venues. Taking testing place preferences into account seems important to improve HIV testing among all MSM populations.

In Côte d'Ivoire, the HIV prevalence among MSM is 18%, making MSM one of the populations most affected by the HIV epidemic.[17] In this context, according to the WHO guidelines, the Ivorian government recommends repeat HIV testing, at least annually, among MSM.[18 19] Thus, MSM-CBTS has been officially recommended since 2009, and political stakeholders make community-based sites their first choice to reach MSM populations.[20] MSM-CBTS has made possible for MSM-related NGOs to offer HIV testing to their premises, but also in certain places frequented by MSM (eg, bar), provided that the community member offering the test has received specific training to do so. However, little is known about whether MSM-CBTS are accessible for all MSM populations and the perceptions of these populations regarding these services.

METHOD

From 25 April 2018 to 1 February 2019, we conducted a respondent-driven sampling (RDS) survey among MSM living in Côte d'Ivoire. RDS methodologies are commonly used to access hard-to-reach populations in contexts where they may be difficult to identify or highly discriminated against.[21] The RDS methodology allows measurements with a CI —potentially generalisable to the population of interest.[22–25] One innovation in our RDS survey was to conduct by phone both the peer-recruitment process and the questionnaire interviews. Traditional RDS surveys often conduct face-to-face interviews, requiring the physical movement of the participant, which may create a geographic selection bias.[17 26–28] A detailed description of our survey methodology with its advantages and limits has been published elsewhere.[29]

Eight seeds (ie, initial participants) were selected across Côte d'Ivoire. Telephone contacts of each seed were obtained from various MSM NGOs from Côte d'Ivoire. Unfortunately, it was not possible to obtain seeds in any other way, as MSM tend to hide their identity due to the stigmatising social environment they face in Côte d'Ivoire. However, through MSM NGO, emphasis was placed on obtaining seeds from various contexts in terms of region of residence and to include seeds who did not know or who were not closed to MSM NGOs.

A text message was sent to the seeds inviting them to participate in the survey. None of the text messages mentioned that the survey was MSM-related to avoid any unwanted disclosure of the MSM participants. A toll-free hotline number was provided in the text messages for those who wanted to participate. For each individual who called the hotline, sex, age and country of residence were assessed. Those who were eligible (men, 18 years or older and living in Côte d'Ivoire) were interviewed. The fourth eligibility criterion (ie, having ever had sex with men) was assessed later, at the end of the questionnaire, to limit any unwanted disclosure. Demographic characteristics and HIV testing practice were collected before the sexual behaviours section. During the sexual behaviours section, the participants were asked if they had already had sex with women only, men only or both women and men. If some individuals reported having had sex only with women in their lifetime, the questionnaire ended at this section and these individuals were thanked for their participation. These individuals were then excluded from the analyses. For participants reporting at least one instance of sexual intercourse with a man in their lifetime, data related to MSM identity perceptions, access to MSM-CBTS and HIV testing site preferences were collected.

At the end of the interview, these participants were invited to refer up to three other MSM from their acquaintances. A financial incentive of FCFA1500 (US$2.5) was sent to the participant using a telephone cash transfer for each referring participant who completed the questionnaire. This incentive was offered as compensation for their time in facilitating the referrals.

MSM-CBTS were defined as places dedicated to MSM where they can be HIV tested. MSM participants were asked if they knew such places and, among those who knew, whether or not they already visited one of these places. All MSM were asked whether they prefer MSM-CBTS, undifferentiated (ie, 'all public') sites or both types of sites for HIV testing. Reasons related to these preferences were also collected.

Univariate analysis of associated factors with access to MSM-CBTS (not knowing such places/knowing but never visited/knowing and already visited) and testing site preferences (MSM-CBTS/undifferentiated testing sites/no preference) was performed using unweighted and RDS-weighted chi-square tests. In line with RDS methodology, RDS-weights were based on the probability of selection which was calculated on the network size of the respondents (ie, 'In total, how many MSM do you know, whether they are friends, partners, or acquaintances?'). The explanatory variables considered included variables related to sociodemographic characteristics, sexual behaviours, sexually transmitted infections (STIs), identity perception, MSM community insertion and sexual behaviour disclosure. Multivariate multinomial models were then conducted and included significant variables at the 0.20 threshold from the univariate analysis. The analyses took into account the RDS design of the study using the R packages survey, RDS and svrepmisc.[30–32] A

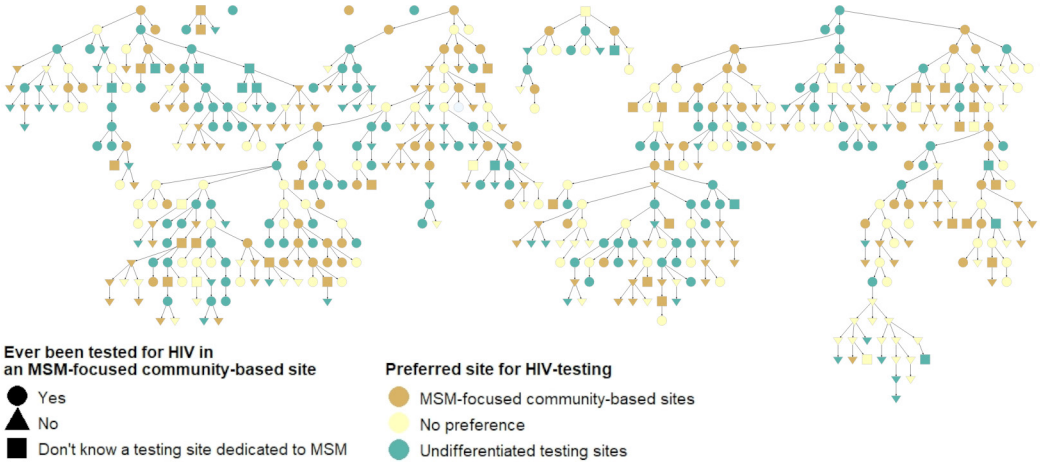

Figure 1 Respondent-driven sampling network recruitment, DOD-CI MSM, 2018 (n=518). For this figure only, the unique individual with a 'don't know' response for testing preferences have been grouped with 'no preference'. MSM, men who have sex with men.

cluster effect on seeds was added for the RDS-weighted analysis. Both unweighted and RDS-weighted analyses are presented, but to increase the conciseness and visibility of some figures and tables, part of the unweighted results will be presented in online supplemental materials.

Patient and public involvement

The development of the research was made in partnerships with local MSM NGOs. The utilisation of the phone in this survey was motivated by the premise that MSM often rely on phone applications to meet other MSM, as they reported to us. Results of this study will be communicated using local MSM NGOs.

RESULTS

Starting with 8 seeds, 568 additional individuals called the hotline to participate in the survey. Among these 576 individuals, 39 (6.8%) were not reached after several call attempts following an appointment, and 3 (0.6%) were not eligible. Of the remaining 534, 16 (2.8%) were excluded since they reported never having had sex with a man. No withdrawal was recorded during the data collection. In total, among the 576 individuals registered in the hotline (including seeds), 518 (89.8%) participated fully in the survey (figure 1).

Among the 518 MSM who participated, 8 were excluded because of missing data on our variables of interest. Thus, 510 MSM were included in our analysis.

Population description and HIV testing practice

In our sample, MSM were mainly young (89.7% were between the ages of 18 and 29), and 94.4% reported a secondary or higher level of education (table 1). More than half (58.5%) lived in Abidjan. The majority of MSM were in a relationship: 25.2% with a man, 16.2% with a woman and 19.6% with both.

Sexual orientation disclosure to one member of the family member was reported by 29.7% of MSM.

Regarding sexual behaviour and STIs, 61.0% of MSM reported three or more sexual partners, and 16.6% reported an STI during the previous 12 months.

The majority (74.1%) reported being HIV tested in the previous 12 months, and 47.5% reported being tested more than once (table 1).

Knowledge of and access to MSM-focused CBTSs

Half (46.8%) of our sample mentioned knowing an MSM-CBTS; among them, 78.9% had ever been HIV tested in one of these sites (table 1). Overall, 36.9% of all MSM had ever visited an MSM-CBTS.

In the bivariate analysis, all variables except couple situation, number of sexual partners during the last 12 months and self-reported sexual orientation were found to be significantly associated with knowledge of and visiting an MSM-CBTS at the 0.20 threshold and were included in the multivariate models (figure 2; see online supplemental table S1 for unweighted and RDS-weighted related numbers).

In the multivariate model, age was not associated with knowledge of MSM-CBTS, but 18–20-years MSM were more likely to have never visited one (vs 21–29 years, ORa 10.27, 95% CI 1.26 to 83.38]) (online supplemental table S2). A high level of education was significantly associated with knowing of an MSM-CBTS (vs secondary education, ORa 2.17, 95% CI 1.00 to 4.76) but was also associated with higher non-attendance at such places (vs secondary education, ORa 4.19, 95% CI 1.07 to 16.34). Disclosure of sexual orientation to one family member was significantly less likely to be associated with not knowing of an MSM-CBTS (ORa 0.33, 95% CI 0.15 to 0.73) and with never visiting one (ORa 0.24, 95% CI 0.06 to 0.89). Finally, a high number of HIV tests performed during the last 12 months (3 or more vs 0) was significantly less associated with not knowing of an MSM-CBTS (ORa 0.14, 95% CI 0.05 to 0.42) and with never visiting one (ORa 0.05, 95% CI 0.01 to 0.32).

Table 1 Description of the population, MSM, Côte d'Ivoire, 2018 (n=510)

	No of participants	Unweighted %	RDS-weighted %
Sociodemographic characteristics			
Age			
18–20 years old	87	17.1	21.5
21–29 years old	352	69.0	68.1
30 years old and more	71	13.9	10.3
Level of education			
None or primary	38	7.5	5.6
Secondary	283	55.5	66.0
Higher	189	37.1	28.4
Professional situation			
Working	126	24.7	26.3
Looking for a job	188	36.9	30.7
Student	196	38.4	43
Department			
Abidjan	323	63.3	58.5
Urban department (excluding Abidjan)	92	18.0	20.3
Rural department	95	18.6	21.2
Relationships, sexual behaviours and STI			
In relationships with:			
Not in a relationship	190	37.3	39.5
A man	159	31.2	24.7
A woman	58	11.4	16.2
Both a man and a woman	103	20.2	19.6
No of sexual partners (last 12 months)			
0–2	125	24.5	39.0
3–5	190	37.3	36.3
Six and more	195	38.2	24.7
Reported an STI (last 12 months)			
Yes	110	21.6	16.6
No	400	78.4	83.4
Identity perception and sexual attraction			
Self-reported sexual orientation			
Homosexual	241	47.3	41.9
Bisexual	247	48.4	49.9
Heterosexual	22	4.3	8.3
Self-reported gender			
Man	320	62.7	65.7
Woman	126	24.7	21.8
Transgender	64	12.5	12.6
Sexually attracted to:			
Men only	174	34.1	25.0
Mainly men but also women	150	29.4	23.8

Continued

Table 1 Continued

	No of participants	Unweighted %	RDS-weighted %
Both men and women	128	25.1	28.9
Mainly women but also men	53	10.4	19.4
Women only	5	1.0	2.9
MSM community insertion and sexual behaviour disclosure			
Attend bars/clubs where MSMs meet			
Yes	246	48.2	30.7
No	264	51.8	69.3
Knows an MSM NGO			
Yes	214	42.0	27.0
No	296	58.0	73.0
Sexual orientation disclosure to a family member			
Yes	212	41.6	29.7
No	298	58.4	70.3
HIV testing history and practices			
Knows a place where HIV testing is available			
Yes	483	94.1	94.1
No	27	5.9	5.9
Has ever been tested for HIV (lifetime)			
Yes	469	92.0	88.8
No	41	8.0	11.2
No of HIV tests done (last 12 months)			
0	114	22.4	25.9
1	121	23.7	26.6
2	128	25.1	24.9
3 or more	147	28.8	22.6
MSM-focused community-based HIV testing sites			
Has ever been tested for HIV in a place dedicated to MSM			
Yes	269	52.7	36.9
No	52	10.2	9.9
Don’t know such places	189	37.1	53.2
Testing site preferences			
Preferred site for HIV-testing			
MSM-focused community-based sites	170	33.3	34.4
No preferences	153	30.0	28.6
Undifferentiated testing sites	187	36.7	37.0

For weighted data, the numbers of individuals are weighted and rounded; therefore, totals may vary by one unit.
MSM, men who have sex with men; NGO, non-governmental organisation; RDS, respondent-driven sampling; STI, sexually transmitted infection.

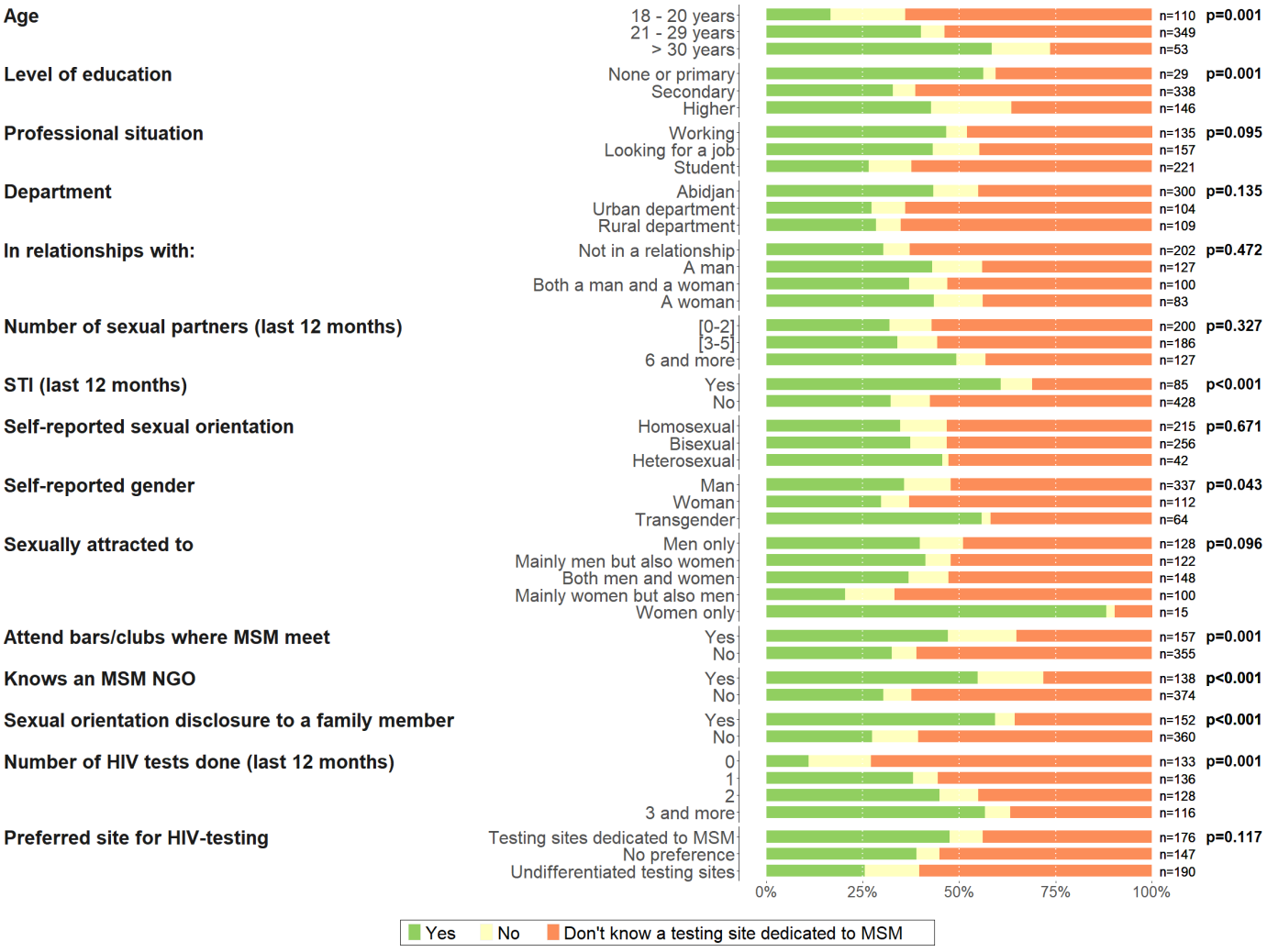

Figure 2 Knowing of and having ever been in MSM-focused community-based HIV testing sites, MSM, Côte d'Ivoire, 2018 (n=510). Global p values were calculated using the Pearson χ^2 test with second-order Rao-Scott corrections. Headcounts presented are RDS-weighted. MSM, men who have sex with men; NGO, non-governmental organisation; RDS, respondent-driven sampling; STI, sexually transmitted infection.

HIV testing site preferences

Among all MSM, HIV testing site preferences were as follows: 34.1% for MSM-focused CBTSs, 37.0% for undifferentiated HIV testing facilities (ie, 'all public') and 28.7% no preference (table 1).

In the bivariate analysis, MSM who preferred HIV testing sites dedicated to MSM were more likely to perceive themselves as homosexual or as women, to be attracted exclusively or mainly to men and to know of an MSM NGO (figure 3; see online supplemental table S3) for unweighted and RDS-weighted related numbers). MSM who preferred undifferentiated testing sites were more likely to be in a relationship with a woman, to be sexually attracted to women, to report being bisexual or heterosexual and to not have disclosed their sexual orientation to a family member. The number of HIV tests was not associated with testing site preferences.

In the multivariate analysis, reporting being bisexual (vs homosexual, ORa 3.45, 95% CI 1.30 to 9.14), not knowing of an MSM NGO (ORa 2.70, 95% CI 0.99 to 7.14) and never being tested for HIV in an MSM-CBTS or not knowing of such places (ORa 4.44, 95% CI 1.07 to 18.38 and ORa 2.52, 95% CI 0.96 to 6.65, respectively) were associated with undifferentiated HIV testing site preference compared with MSM-CBTS (online supplemental table S4).

Reason for HIV testing site preferences and satisfaction with MSM-CBTS

The main reasons for a preference for MSM-CBTS were feeling more confident (37.4%), confidentiality or discretion issues (23.2%) and a preference for a site visited by MSM (20.3%) (figure 4; see online supplemental table S5) for unweighted and RDS-weighted related numbers). For those who preferred undifferentiated HIV testing sites, the main reason was for confidentiality or discretion purposes (40.2%).

Among MSM who visited an MSM-CBTS at least once, nearly all reported that they were well received (97.6%), that they felt confident during the visit (96.4%) and that

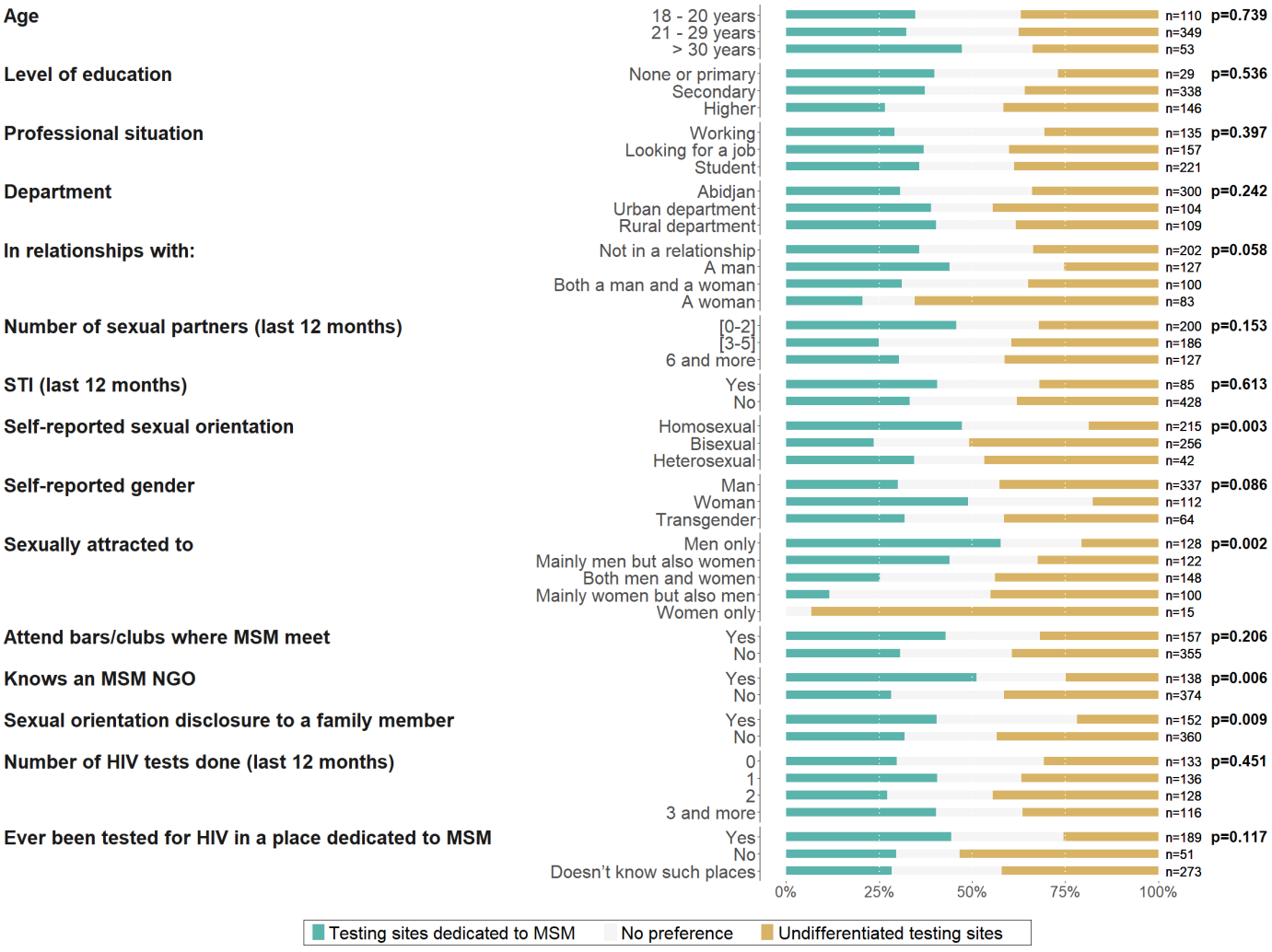

Figure 3 HIV testing site preferences depending on sociodemographic characteristics, identity perceptions, MSM community insertion, sexual behaviour, STI, HIV testing and sexual behaviour disclosure, RDS-weighted data, MSM, Côte d'Ivoire, 2018 (n=510). P values were calculated using the Pearson chi-squared test with second-order Rao-Scott corrections. Headcounts presented are RDS-weighted. MSM, men who have sex with men; NGO, non-governmental organisation; RDS, respondent-driven sampling; STI, sexually transmitted infection.

confidentiality was respected (97.9%). A total of 94.9% reported that they would return to one of these sites.

DISCUSSION

Our results show that MSM-CBTS are relevant since they are well accepted and frequented by a large part of the MSM population. MSM-dedicated sites also seem to enable repeat testing since knowing of or visiting an MSM-CBTS site was associated with a higher number of HIV tests in the past 12 months. Many other studies have shown that community HIV testing is relevant and allows broad and frequent testing among MSM.[9–12]

Despite the benefit of community-based HIV testing, our results show that access to an MSM-dedicated HIV testing site remains low, as only one-third of respondents had ever visited such places. While another survey conducted in Côte d'Ivoire suggests higher access to HIV testing sites dedicated to MSM, this survey focused on only five cities with well-known MSM-related NGOs and thus may not be nationally representative.[33] The lack of information on MSM-dedicated HIV testing sites is one of the major barriers found in our survey; only half of MSM reported knowing of such places. However, improving communication about MSM-dedicated HIV testing sites may be challenged by the stigmatising context in Côte d'Ivoire. Better communication may lead to an increase in the visibility of such sites by the general population, which may trigger acts of stigmatisation against these sites and their users. Although same-sex behaviours are not criminalised in Côte d'Ivoire, acts of stigmatisation against MSM are commonly reported.[34] Thus, to improve communication about MSM-dedicated HIV testing sites, it is first necessary to strengthen the legal framework that protects the rights of MSM populations.

One significant result of our study is that a large part of MSM prefer to be HIV tested in traditional 'all-public' testing sites rather than MSM-dedicated sites. This preference is mainly due to confidentiality issues, but it may

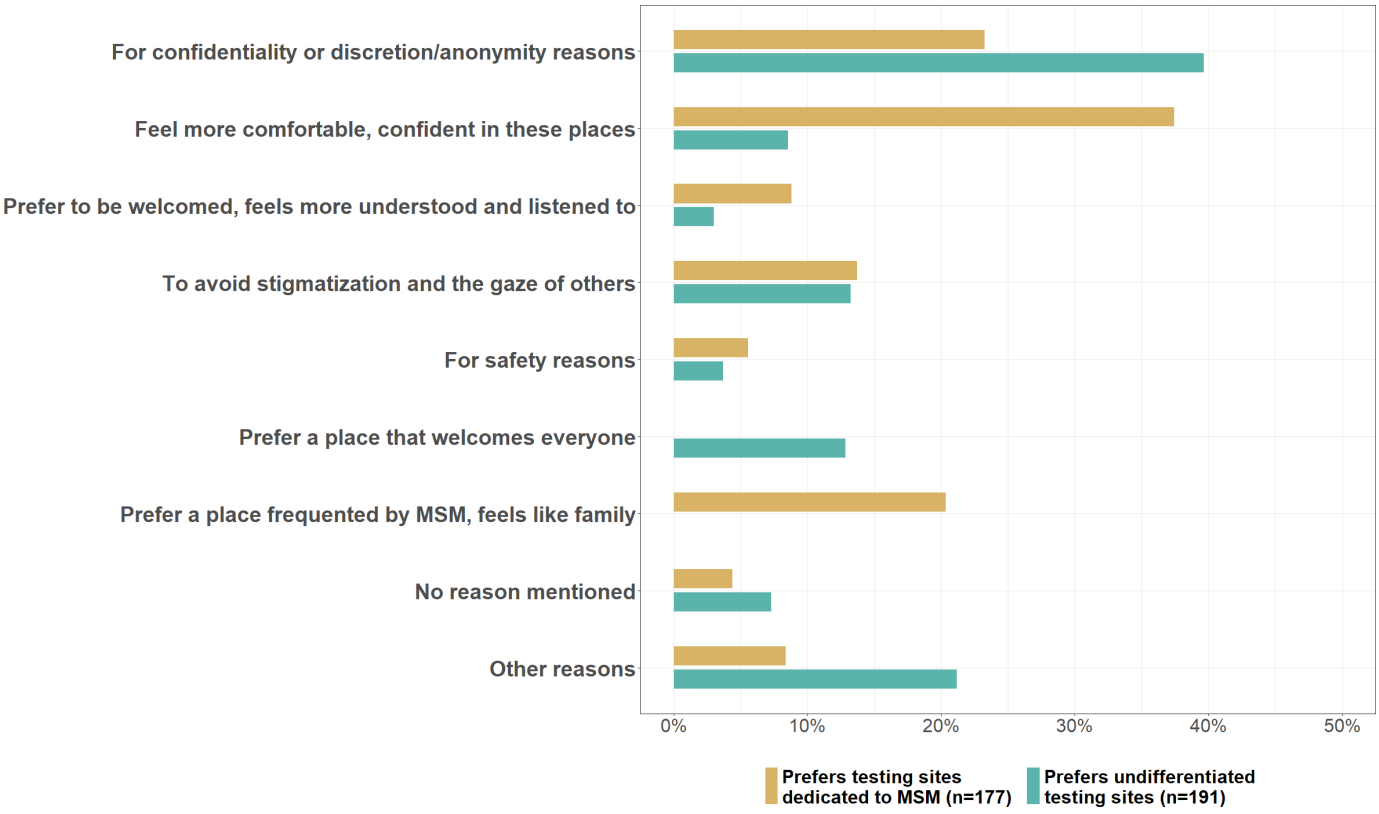

Figure 4 Reasons related to preference for MSM-dedicated HIV testing sites or undifferentiated HIV testing sites, RDS-weighted data, DOD-CI MSM, 2018 (n=368). MSM, men who have sex with men.

also be related to the fear of being identified as MSM when accessing these sites.[35] In a society where same-sex practices are not socially accepted and there are no laws to defend against discrimination based on sexual orientation, some MSM are afraid to be identified as such and thus prefer to attend undifferentiated health facilities.[6 16]

MSM who prefer undifferentiated HIV testing settings may be among those who do not perceive themselves as 'gay' or belonging to the MSM community.[14 35–37] these MSM tend to see themselves as heterosexual (or bisexual), to be sexually attracted by women or to hide their sexual orientation.[13 14] They are more sensitive to social norms, including having female sex partners, being married to a woman and favouring secrecy and privacy about personal matters.[38 39] They are more afraid of being perceived as an MSM and may deny same-sex behaviour, even to healthcare workers.[35 38] Thus, they often miss out on prevention messages and testing venues that target MSM populations.[35]

Sexual behaviours and STIs were not associated with HIV testing site preferences in our bivariate analysis. The association between sexual behaviour and the testing site is not well established and diverges across studies, suggesting that high-risk MSM do not necessarily focus on a single testing offer.[9 13 40] It is, therefore, important to diversify the types of testing places to maximise testing coverage among MSM.

Regarding the methodology, our survey is, to our knowledge, the first RDS worldwide when both interview and peer recruitment are conducted by phone.[29] Traditional RDS requires individuals to access survey sites in person, which results in an overestimation of individuals who live near these sites and those who are close to the community network.[26 27 41] In our context, other RDS alternative methodologies, such as web-based RDS, have not been considered because it would have led to selection bias based on internet network availability and having access to a smartphone.[42 43] While network coverage for voice calls may be poor in some remote areas of Côte d'Ivoire, the number of unreachable respondents remained quite low (<5%) in our survey, suggesting a limited effect of network coverage issues.[29]

Using the phone for recruitment and the questionnaire interview of the RDS allowed us to reach rural parts of Côte d'Ivoire, although the majority of our sample was concentrated in urban areas (including Abidjan). Perhaps, this concentration of MSM living in urban areas may be expected since a study conducted in the USA suggests that MSM tend to reside in highly urbanised areas.[44]

The majority of MSM in our sample were mainly young (ie, 18–29 years), with very few above 30 years. Using different methodological approaches, other surveys conducted in Côte d'Ivoire have tended to recruit the same age profile.[17 45] Although our methodology is innovative, it failed to recruit older MSM (ie, 30 years and over), similar to other MSM-related surveys conducted in sub-Saharan Africa.[26 27 41] Even if emphasis was made to

include seeds far from MSM NGOs, the majority of seeds were selected using contacts in MSM NGO which may have led to an overestimation of the number of people aware of an MSM-related NGO or an MSM-CBTS. This overestimation would highlight the fact that the majority of MSM are not aware of or do not have access to these sites and therefore the maintenance of an alternative HIV testing site is needed.

One of the limitations of our analysis is that we did not take into account community-based HIV testing outside fixed structures (eg, mobile testing). However, this form of testing remains less common among MSM in Côte d'Ivoire, with 11.1% being tested outdoors (eg, outdoor testing campaign, home testing) during their last HIV test.[46] Moreover, whether outside or inside of fixed structures, community-based HIV testing takes place in MSM-identified places (eg, MSM NGOs, clubs and bars visited by MSM) and thus misses MSM who are far from the MSM community. These MSM who live far from MSM communities seem quite common; only 31% of our sample reported visiting bars or clubs where MSM meet each other, and only 27% knew of an MSM NGO.

Other data related to pre-exposure prophylaxis or HIV self-testing uptake were not collected since both were not publicly available in Cote d'Ivoire during the survey implementation.

The diversity of MSM profiles in terms of preferences and behaviours challenges HIV prevention and testing interventions that target these populations. MSM who report being homosexual or having only male partners have a higher HIV prevalence and are easily reached by MSM-targeted interventions, while MSM who report being heterosexual or bisexual or having sex with both male and female partners have a lower HIV prevalence and are less easily reached by MSM-target interventions.[9 47 48] Although risk behaviours and HIV infection are less common among MSM who have female sexual partners compared with other MSM, HIV prevalence remains relatively high in this group compared with the general population. This last point underscores the need for alternative testing options in addition to community-based testing to avoid overlooking certain high-risk MSM populations.

CONCLUSION

MSM-focused CBTSs are relevant and reach a large part of the MSM populations. However, the majority of MSM do not access these sites. The lack of information and the stigmatising social environment challenge access to these sites.

MSM-dedicated HIV testing sites are also not adapted to all MSM populations since some of these populations prefer undifferentiated (ie, 'all public') HIV testing sites.

If the government and other relevant stakeholders in policy formulation and implementation focus on MSM community sites to reach MSM populations, they should not neglect other HIV testing settings. Maintaining undifferentiated HIV testing sites and training healthcare workers to address MSM-related needs in these sites are recommended.

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Contributors MI: conceptualisation, data curation, formal analysis, methodology, validation, visualisation, writing of original draft, review and editing of final draft; AKK and SN: data curation, formal analysis and project administration; AB and SC: conceptualisation, methodology, project administration, review and editing of final draft; LS, CD, MK, ADdL: conceptualisation, methodology, review and editing of final draft; JL: conceptualisation, methodology, review, editing of final draft and guarantor.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval The survey received approval from the ethics council of Côte d'Ivoire (ref: 058/MSHP/CNER-kp). All procedures performed in the study were in accordance with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available on reasonable request. The datasets analysed during the current study are not publicly available as they are the property of the DOD-CI project. Data are however available from the authors on reasonable request and with permission of one of the principal investigators.

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