



Digital Culture & Education (DCE)

Publication details, including instructions for authors <http://www.digitalcultureandeducation.com/>

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Online Publication Date: April 15 2012

To cite this Article: Henry, E., Yomb, Y., Fugon, L., Spire, B. (2012). The use of the Internet in male sexual encounters by men who have sex with men in Cameroon. *Digital Culture & Education*, 4:1, 65-76.

URL: http://www.digitalcultureandeducation.com/cms/wp-content/uploads/2012/04.theHIVe_3003.pdf

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Emilie Henry, Yves Yomb, Lionel Fugon, Bruno Spire

Abstract

While data and observations from the field suggest the Internet is a medium wherein disclosure, communication and encounters between men who have sex with men (MSM) are made possible, few studies have examined this question in Africa's Sub-Saharan countries. The objective of our study was to define the proportion and profile of persons having access to the Internet as a means of encountering male sexual partners among a group of MSM living in the city of Douala, Cameroon. The study draws on data from both a survey on the sexual activity and practices of MSM set up in Douala in 2008 and from an online HIV outreach and prevention pilot study. The survey data were collected among a convenience sample of 168 MSM during face-to-face interviews with trained interviewers. A total of 52 individuals (34%) reported having met their partners over the Internet during the previous six months. In the multivariate analysis, having a university education level, not having a lucrative activity and having had a larger number of partners during the course of the previous six months were independent correlates of having met sexual partners on the Internet. Qualitative data from the chats show that the perception of risk of exposure to and infection with HIV and AIDS was not widespread in persons encountered in the Internet-based prevention, especially hidden MSM who were also the most reticent about going to the association's center when provided a referral. This community-based research is the first study on MSM in Cameroon and their Internet use to find male sexual partners. Results underline the need to further investigate the use of the Internet by MSM in African contexts in order to adapt prevention strategies and interventions.

Keywords: African MSM, Cameroon, community-based research, Internet, HIV and AIDS, HIV prevention, hidden MSM, sexual encounters

Introduction

Several studies have highlighted both the heightened risks faced by men who have sex with men (MSM) in Sub-Saharan Africa in terms of their exposure to HIV and AIDS (Niang et al., 2003; Parker, Khan, & Aggleton, 1998) and the higher HIV prevalence among MSM when compared with other populations living with HIV and AIDS (Baral, Sifakis, Cleghorn, & Beyrer, 2007; Van Griensven, 2007; A. Wade et al., 2005). However, the growing visibility of these previously 'invisible' or unrecognised concentrated epidemics has not been accompanied by any real change in terms of targeted government responses to the HIV and AIDS epidemic among gay men, other MSM and transgenders (Henry et al., 2010; McIntyre, 2010).

To date in most Sub-Saharan countries, national strategies to fight the HIV and AIDS epidemic and HIV sexual prevention messages are primarily directed only toward heterosexual populations (Henry et al., 2010). Prevention messages and interventions targeting MSM are often left to the goodwill of local community organisations (CBOs) working in a complex and hostile social, political and sometimes legal environment. This situation makes it difficult for CBOs and non-governmental organisations (NGOs) to

mobilise and address the increasing HIV prevalence among MSM in Cameroon and other Sub Saharan countries. Moreover, during the last two years, while international organisations have mobilised in the fight against HIV and AIDS, notably UNAIDS and the Global Fund making the question of the respect of human rights and sexual minorities a priority (The Global Fund, 2009, UNAIDS, 2009), many African countries have seen their legislation and/or its application evolve towards further penalisation of homosexual practices¹.

These examples of restrictive legislation effectively banish gay men and other MSM underground, in turn depriving them of access to HIV and AIDS prevention and care (Henry et al., 2010). While data and observations from the field (Alternatives-Cameroun, 2011) suggest the Internet is a medium wherein disclosure, communication and sexual encounters between gay men and other MSM are made possible, few studies have examined this in an online context in Sub-Saharan countries. This gap consequently deprives frontline workers of potentially important knowledge in terms of adapting, proposing and enacting new HIV prevention strategies and interventions.

In Cameroon, the prevalence of HIV and AIDS in the general population is 5.3%. But this general data masks very large disparities. Although prevalence data for MSM are not locally available, several research studies (Gueboguo, 2006; Henry et al., 2010) and data collected in centres for HIV and AIDS prevention and care show that MSM are confronted with an increased risk of HIV infection. Indeed, the Cameroonian context is stigmatised by an intense social and political rejection and repression of homosexuality² that makes access to HIV and AIDS prevention and care very difficult.

A localised community-based and led response

In response to the difficult context described above in Cameroon, *Alternatives-Cameroun*—a non-profit CBO for the defense of sexual minorities—was launched in 2006. Initially investing its efforts in the defense of human rights, the organisation has progressively become involved in on-the-ground work, tackling the lack of HIV and AIDS and STIs prevention and care for gay men and other MSM. Today, its activities include prevention campaigns, promoting voluntary confidential counseling and testing (VCCT), distributing condoms and lubricating gel as well as the organisation of focus groups around sexuality and sexual risk reduction. *Alternatives-Cameroun* is funded by [Sidaction](#), [amfAR](#), [Solidarité Sida](#), and [Fondation de France](#). 30 volunteers, 10 full-time and 23 part-time employees work for the organisation. In 2007, *Alternatives-Cameroun* launched an online HIV and AIDS outreach and prevention intervention that we describe below.

Using data from both a survey on 168 MSM in Douala, the economic capital of Cameroon, and from *Alternatives-Cameroun's* online HIV outreach and prevention pilot study, we present preliminary findings on the use of the Internet by gay men and other MSM for meeting male sexual partners in Douala. The objective of our pilot study was to define the proportion and profile of persons who access online encounters in order to implement targeted prevention messages to this population of gay men and other MSM.

Methodology

Definition of the term MSM

The term MSM is widely used in the literature and denotes men who have sex with men. These men do not necessarily describe themselves as gay or homosexual (Young & Meyer, 2005). In our study, we decided to use this term to denote these populations' sexual practices rather than sexual identity. Even though this choice fails to capture the

specificities of men of different sexualities identities (Pathela, Blank, Sell, & Schillinger, 2006), a focus on MSM sexual practices is effective for designing HIV prevention interventions by promoting agency and changes in sexual behaviour (Kippax et al., 2007).

Study Design

The study draws on data from a quantitative survey and from qualitative data gathered through an online HIV outreach and prevention pilot study.

ESANHOD Survey (étude sur la santé des hommes à Douala)

Excerpts of the data presented in the results section are taken from the ESANHOD survey on the sexual activity and practices of MSM, carried out by *Alternatives-Cameroun* with the support of the French association [AIDES](#) between May and June 2008 in Douala. A convenience sample of 168 MSM was used. The criteria for inclusion in the study were as follows: being a man aged at least 18 years; resident in Douala for at least six months; and having had at least one sexual encounter with another man during the course of his life.

Moving about in a hostile environment, the MSM population is often described as being difficult to reach in Cameroon. The recruitment of survey participants was facilitated by the integration of members from *Alternatives-Cameroun* into MSM networks. Five members of *Alternatives-Cameroun* recruited participants from their social networks and in places where MSM regularly meet in Douala (nightclubs, snack bars, mixed or gay bars in Douala and its suburbs as well as via the Internet). This ‘snowball’ sampling method facilitated the extension of recruitment to persons having less contact with *Alternatives-Cameroun*. Using an 85-item questionnaire, the various ways sexual partners met were investigated. Qualitative data was also collected from 25 respondents in order to specify the responses to the questionnaire itself.

Variables derived from the face-to-face questionnaire items were first tested using univariate logistic regression (see Table 1 below). Those which achieved a liberal significance level of ≤ 0.20 in the univariate analyses were included in the multivariate model. For the multivariate analysis, a backward elimination approach to logistic regression was used and variables with a p value of ≤ 0.05 were considered to be significantly associated with the outcome. A good means for assessing a binary logistic regression model’s ability to accurately classify observations is to construct a receiver operating characteristic (ROC) curve and evaluate its associated area. A model with a high area under the ROC curve suggests that the model is able to accurately predict the value of an observation’s response (Hosmer & Lemeshow, 2000).

Alternatives-Cameroun Online HIV outreach and prevention pilot study

The study also collected qualitative data on accessing the Internet for MSM sexual encounters from the online outreach and prevention pilot study carried out by *Alternatives-Cameroun*. Since 2007, following an exchange of experience with [Association de lutte contre le sida \(ALCS\)](#) a Moroccan association which was experimenting with a similar type of intervention, *Alternatives-Cameroun* has extended its work on Internet-based prevention actions. The intervention was enhanced in 2009 from the results of the ESANHOD study and is ongoing in Douala today.

Alternatives-Cameroun’s online HIV outreach and prevention pilot study was implemented by first identifying the websites used most for gay and mixed sexual encounters in Cameroon. [GayRomeo](#) and [123LOVE](#) appeared to be the most popular websites. Not having any agreement with the webmasters of these Internet sites, the association created “gay” nicknames or profiles (e.g. “gay prevention”), accompanied by

slogans which enabled it to become rapidly visible and identifiable by online users. On these websites, chats are organised on a nationwide basis, allowing *Alternatives-Cameroun* direct contact with MSM participants connecting online from different cities throughout Cameroon. Figure 1 below shows an example of a typical chatroom from the 123 love website:

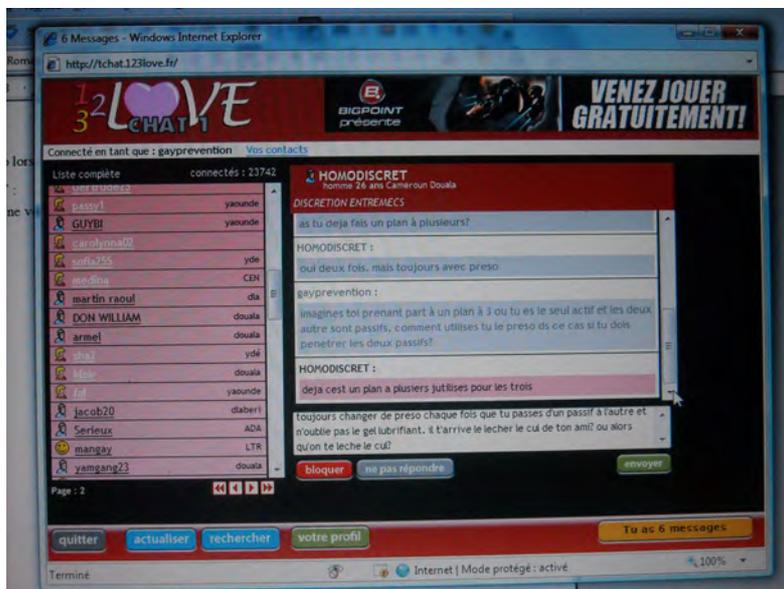


Figure 1. Chatroom on the commercial cruising website [123 LOVE](http://123love.fr) used for the pilot study

Several trained HIV and AIDS prevention counselors, who have good knowledge of these sites, direct online chats with individual MSM several times a week. In addition, the visibility of the nickname, suggesting prevention and gay sexuality, prompted online users to directly contact the counselors.

The dialogues facilitated in the chatrooms draw on health psychology and health promotion theories such as client-centered therapy (Rogers, 1957) and motivational interviewing (Miller & Rollnick, 2002). Counselors have been trained to adapt their discourse to the needs of MSM they meet online, to develop their personal skills, and to give people greater control over their health and the environments in which they live. Thus, online counselors ask open-ended questions like: “What do you think of HIV and AIDS?” or “Do you use condoms and lubricating gel during sexual encounters?” The aim is to enable free and non-judgmental discussions, to establish contact with Internet users, to provide MSM with the opportunity to express themselves about their sexuality, and to discuss personal problems or questions they may have about sex and/or HIV and AIDS prevention. Counselors then provide MSM sexual risks reduction information. Online users with whom contact is established are then directed towards a private MSN Messenger chat hosted by the association, so as to maintain regular contact with the MSM met online.

For the needs of the pilot study, thematic qualitative analysis was carried out on the activity reports (*Alternatives-Cameroun*, 2011) and on interviews with members of *Alternatives-Cameroun* working on Internet-based prevention. This was only a pilot study with a limited evaluation, and it was not possible to systematically analyse the chat contents. Under these constraints, a thematic approach enabled a first cut in-depth analysis of the data collected.

Results

Among the 168 MSM taking part in the ESANHOD survey, we restricted the analysis to the 153 who replied to the question regarding meeting places. Among the 15 persons who did not respond to the question, 14 had not had sexual partners during the six previous months and 1 refused to answer.

Thirty-four percent of respondents (52) indicated having met their partners over the Internet. This was the second most frequent means of meeting partners after meeting through friends (42.5%).

In the univariate analysis, the following factors were associated with meeting one's partners on the Internet ($p < 0.20$): having a university educational level, not having a lucrative activity, being single, not having any children, not having paid for sexual relations during the previous six months and having had a greater number of partners during the previous six months.

Variables	N (%) or Median / [IQR]	OR [95%CI]	Pvalue	aOR [95%CI]	Pvalue
Having being exposed to HIV prevention interventions	88 (58%)	0.80 [0.41 - 1.56]	0.51		
Having a university educational level	43 (28%)	2.51 [1.21 - 5.22]	0.01	3.01 [1.36 - 6.64]	0.006
Having had one or more unprotected anal penetrations with one or several male partners in the previous six months	79 (52%)	1.15 [0.57 - 2.33]	0.69		
No stable male partner during one's lifetime	11 (7%)	0.41 [0.08 - 1.97]	0.26		
Sexual orientation disclosed to at least one relative or friend	69 (45%)	0.95 [0.48 - 1.86]	0.88		
Having a lucrative activity	82 (54%)	0.50 [0.25 - 0.99]	0.05	0.37 [0.17 - 0.81]	0.01
Being single	130 (85%)	6.56 [1.48 - 29.19]	0.01		
Having at least one child	45 (29%)	0.45 [0.20 - 1]	0.05		
Not having been in Douala for at least four weeks during the previous year	44 (29%)	1.53 [0.74 - 3.15]	0.25		
Having already paid for sexual relations during the previous six months	23 (15%)	0.36 [0.11 - 1.11]	0.07		
Knowing someone with HIV	72 (47%)	1.20 [0.61 - 2.34]	0.6		
Age-Year	25 [23 - 30]	0.96 [0.91 - 1.03]	0.26		
Age at time of first sexual relation with a man - year	19 [17 - 22]	1.04 [0.95 - 1.13]	0.43		

Number of male sexual partners during the previous six months	2 [1 - 4]	1.26 [1.08 - 1.46]	0.003	1.32 [1.12 - 1.55]	0.001
Having met sexual partners over the Internet	52 (34%)				

Table 1: Results from univariate and multivariate analyses for the logistic regression of factors associated with the use of the Internet in order to meet sexual partners (N=153)

In the multivariate analysis, having a university educational level, not having a lucrative activity and having had a larger number of partners during the course of the previous six months were independent correlates of having met sexual partners on the Internet (Table 1). The area under the ROC curve is 0.75 [0.66 – 0.83] which is an acceptable discrimination (Hosmer & Lemeshow, 2000).

During 2010, data from the online HIV outreach and prevention intervention have shown that the sites most visited by MSM in Cameroon were [GayRomeo](#) and [123LOVE](#), which is a mixed site. Thirty-seven Internet chats were hosted over the course of the year. Three hundred and seven contacts were made during these interventions. Amongst these, 104 persons were directed to the association's center (Centre Access) and 75 to Alternatives-Cameroon MSN chat rooms for further personalised follow-up.

Qualitative data from the pilot study reveal that the perception of risk of exposure to and infection with HIV and AIDS was not widespread among MSM encountered in the chat rooms. Their knowledge about modes of transmission and sexual risks reduction was limited and many had erroneous ideas on personal risk to HIV infection. Some of the Internet-users thought for example they were protected from HIV and AIDS when having anal sex. Others explained they used various products like skin conditioner or vaseline as lubricants. This was much more frequently the case for those MSM who were “underground”. The term “underground” is used by *Alternatives-Cameroun* to describe individuals who hide their sexuality with men and who are not in contact with the MSM or gay networks in Douala. This reality has been widely described with the term “hidden MSM” in the international research literature (Geibel, Tun, Tapsoba, & Kellerman, 2010; Walsh, Lasky and Morrish, 2011).

Complementing the pilot study, the interviews carried out within the ESANHOD Survey study participants, revealed numerous cases of blackmail and violence encountered by participants who had physically met with sexual partners contacted through the Internet. For many, these encounters effectively turned into traps where they were blackmailed using disclosure of sexual orientation as a threat, robbed and/or beaten. The fear of being exposed to different forms of violence as a result of frequenting the Internet and sharing their identity, orientation, and/or sexual practices with unknown others was consequently a recurrent subject for discussion with counselors in the online chats.

Consequently the association met with great difficulty when trying to follow-up these Internet-based prevention chats. Most of Internet users were cautious and distrustful when the contacts started to become closer. With the majority of them, it was difficult to continue the counseling beyond a chat or an interpersonal exchange (i.e a direct contact via email or phone). Few participants took advantage of referrals to the association's centre. “Underground” participants were the most reticent about going to the association's center when referred there.

Discussion

This pilot study's results are among the first to focus on the Internet as a meeting place for MSM and on the possibilities of implementing Internet-based HIV prevention interventions in Cameroon. They show that more than a third of those interviewed (52 out of 153) used the Internet to meet sexual partners. These findings are consistent with a meta-analysis of 22 studies in English-language publications (Liau, Millett, & Marks, 2006). This analysis showed that in studies recruiting MSM not through the Internet, 40% reported using the medium to meet sexual partners. In the United States, studies have also shown that the Internet plays an important role in the constitution and functioning of social and sexual networks (Chiasson, Hirshfield, & Rietmeijer, 2010). In contexts where same sex sexuality is punishable by law, as in Cameroon, meeting places are limited and our results suggest that the Internet constitutes a favoured meeting place that requires further critical analysis. Yet, few studies have investigated and tried to address this issue to improve the design of online HIV prevention interventions.

In our study, meeting sexual partners over the Internet was associated with having a university educational level, with not having a lucrative activity and having had a greater number of partners during the previous six months (Table 1). One inference is that MSM in Douala with a university educational level have greater capacities in the use of computers through their studies and therefore are more inclined to use the Internet for seeking sex. University education level may also be correlated with higher social class and better Internet access. According to the results of several studies, one's educational level is a developmental factor in the use of new technologies at country level (Billon, Marco, & Lera-Lopez, 2009; Mocnik, 2010). In contrast, not having a lucrative activity is undoubtedly associated with more free time coupled with an increase in social isolation. Using the Internet might enable individuals without a lucrative activity to overcome their isolation. These results provided us important information to tailor HIV prevention messages and interventions.

Unlike the results from the meta-analysis done by Liau (Liau et al., 2006), our study did not highlight any association between meeting one's partners on the Internet and having a greater number of unprotected sexual relations. Nevertheless, the results suggest a non-negligible risk of HIV and AIDS exposure. Indeed, our study points out that there were a greater number of MSM using the Internet in Cameroon as a means to meet sexual partners. A similar association was highlighted in a community research study carried out in British Columbia (Ogilvie et al., 2008). Studies have also highlighted the greater number of sexual partners in the MSM population as a factor associated with a greater risk of HIV and AIDS exposure (Xu, Sternberg, & Markowitz, 2010). These results emphasise the need for continuous HIV and AIDS prevention interventions in this population. Internet-based outreach should be developed to complement classical prevention approaches such as peer education and community mobilisation.

This study's qualitative data underline the fact that Internet prevention actions enable contact with MSM who do not usually frequent places where traditional prevention actions are undertaken, for example pick-up joints. The particular profile of the respondents and their weak perception of HIV and AIDS risk call for the implementation of targeted interventions (Bauermeister, Giguere, Carballo-Diéguez, Ventuneac, & Eisenberg, 2010). Better knowledge of Internet users' risks profiles should particularly be used to better equip counselors to adapt discussion and risk reduction strategies. While there have been encouraging experiments in the United States and in the Western European countries (Bowen, Horvath, & Williams, 2007;

Kok, Harterink, Vriens, De Zwart, & Hospers, 2006; Rosser et al., 2009; Davidovich, De Wit, & Stroebe, 2004), these approaches cannot simply be translated to the Cameroonian context, where homosexuality is criminalised and access to Internet is limited. Instead Internet-based HIV outreach and prevention needed in such disabling environments require an alternative framing that places greater attention on fighting stigma and discrimination online.

The cases of violence, extortion and blackmail within the MSM population in the Cameroonian context have already been well documented in a 2008 [ILGA](#) survey (Gueboguo, 2008). However violence has also been described within contexts that are *a priori* less hostile. A recent study carried out in the United States has shown that young gays who meet their sexual partners on the Internet are at greater risk of violence (Bauermeister et al., 2010). As in our study, for younger people, the perception of the risk of violence is much greater than that of exposure to HIV and AIDS. Online interventions need to be tailored taking these risks in consideration and could focus on the development of more secure spaces for discussion between MSM. These interventions could also be extended to broader anti- stigma and discrimination campaigns for a wider public, especially on the websites used most for gay and mixed sexual encounters in Cameroon. Finally hotline development should be considered to maintain contact with “hidden” MSM who do not want to be in contact with gay networks in Douala and who are reticent about going to the association’s center when referred there.

Limitations

Our results have limitations. Firstly, although convenience sampling was the only way of assuring the safety of the participants, the snowball technique may have introduced selection bias (Evans, Wiggins, Mercer, Bolding, & Elford, 2007). The qualitative data from the interviews suggest that the study sample might have led to an overrepresentation of young MSM with a high educational level. An [RDS](#) (respondent-driven sampling) method could perhaps have helped to better avoid any selection bias. Nevertheless, the qualitative data suggest that the use of the snowball technique was useful in mobilising participants.

Our study was partly carried out in a limited urban zone, that of Douala. An economic center of Douala’s size probably offers a greater degree of sexual liberty and greater opportunities to meet male sexual partners. Furthermore, access to and use of the Internet (Billon et al., 2009) is much greater than in other regions and cities in Cameroon. With its two million inhabitants, this port city is the most cosmopolitan of the country, both in terms of ethnic and regional origins of the population and its socioeconomic stratification (Eboko, 2000).

The study was carried out on a limited number of participants. Despite the hostile context, it nevertheless showed the feasibility of carrying out surveys in the MSM population in Cameroon with the help of networks of associations acting as on-the-ground intermediaries.

Practical steps to improve online community-based and led responses

Despite its limitations, our study clearly shows the need to implement Internet-based prevention interventions while developing parallel complementary research of social and political contexts in order to better understand the use of the Internet by MSM, both in

Cameroon and in other countries where a hostile environment compels a large number of MSM to go underground.

Even though research in the field of online HIV preventions is booming in Western countries, very few studies have looked at the question in Sub-Saharan African countries where the need for Internet-based HIV and AIDS outreach and prevention is just as great. From the point of view of social, economic, political and legal realities, all HIV prevention intervention strategies need to be contextualised. Expertise of new researchers of Internet and social networking technologies and practices is necessary (Walsh & Singh, 2012).

Our study analysed data collected in 2010. In the meanwhile Internet-based interventions have been developed in many countries in Sub-Saharan Africa and pilot projects have been extended and strengthened. Nevertheless a regional strategy is still lacking compared to other contexts such as Latin America or Asia. Challenges are also specific to the social and political context. A mapping of online community-based and led interventions could help to identify available expertise, best practices and to define guidelines for existing and up-coming interventions. To improve the quality of interventions and their impact, the design and implementation of Internet-based interventions for gay and other MSM communities should include precise evaluation systems in order to rapidly make good practices available to researchers, practitioners and activists engaged in HIV prevention.

References

- Alternatives-Cameroun. (2011). *Rapport d'activité 2010*. Douala.
- Baral, S., Sifakis, F., Cleghorn, F., & Beyrer, C. (2007). Elevated risk for HIV infection among men who have sex with men in low- and middle-income countries 2000-2006: a systematic review. *PLoS Medicine*, 4(12), e339. doi:10.1371/journal.pmed.0040339
- Bauermeister, J. A., Giguere, R., Carballo-Diéguez, A., Ventuneac, A., & Eisenberg, A. (2010). Perceived risks and protective strategies employed by young men who have sex with men (YMSM) when seeking online sexual partners. *Journal of Health Communication*, 15(6), 679-690. doi:10.1080/10810730.2010.499597
- Billon, M., Marco, R., & Lera-Lopez, F. (2009). Disparities in ICT adoption: a multidimensional approach to study the cross-country digital divide. *Telecommunications Policy*, 33(10-11), 596-610.
- Bowen, A. M., Horvath, K., & Williams, M. L. (2007). A randomized control trial of Internet-delivered HIV prevention targeting rural MSM. *Health Education Research*, 22(1), 120-127. doi:10.1093/her/cyl057
- Chiasson, M. A., Hirshfield, S., & Rietmeijer, C. (2010). HIV prevention and care in the digital age. *Journal of Acquired Immune Deficiency Syndromes (1999)*, 55 Suppl 2, S94-97. doi:10.1097/QAI.0b013e3181fcb878
- Eboko, Fred. (2000). Risque-sida, pouvoirs et sexualité. La puissance de l'Etat en question au Cameroun. *Le désarroi camerounais. L'épreuve de l'économie-monde* (L'Harmattan.). Paris: Courade G.
- Evans, A. R., Wiggins, R. D., Mercer, C. H., Bolding, G. J., & Elford, J. (2007). Men who have sex with men in Great Britain: comparison of a self-selected internet sample with a national probability sample. *Sexually Transmitted Infections*, 83(3), 200-205; discussion 205. doi:10.1136/sti.2006.023283
- Geibel, S., Tun, W., Tapsoba, P., & Kellerman, S. (2010). HIV vulnerability of men who have sex with men in developing countries: Horizons studies, 2001-2008. *Public Health Reports (Washington, D.C.: 1974)*, 125(2), 316-324.

- Gueboguo, Charles. (2006). *La question homosexuelle en Afrique. Le cas du Cameroun.* (L'Harmattan.). Paris.
- Gueboguo, Charles. (2008). *La problématique de l'extorsion et du chantage sur la base de l'orientation sexuelle au Cameroun: sociologie de l'expérience des bisexuels/ les, gays, lesbiennes et transgenres.* International Gay and Lesbian Human Rights Commission.
- Henry, E., Marcellin, F., Yomb, Y., Fugon, L., Nemande, S., Gueboguo, C., Larmarange, J., et al. (2010). Factors associated with unprotected anal intercourse among men who have sex with men in Douala, Cameroon. *Sexually Transmitted Infections*, 86(2), 136-140. doi:10.1136/sti.2009.036939
- Hosmer, D. W., & Lemeshow, S. (2000). *Applied logistic regression.* John Wiley and Sons.
- Kok, G., Harterink, P., Vriens, P., De Zwart, O., & Hospers, H. (2006). The Gay Cruise: developing a theory and evidence-based Internet HIV prevention intervention. *Sexuality Research and Social Policy*, 3, 52-67.
- Liau, A., Millett, G., & Marks, G. (2006). Meta-analytic examination of online sex-seeking and sexual risk behavior among men who have sex with men. *Sexually Transmitted Diseases*, 33(9), 576-584. doi:10.1097/01.olq.0000204710.35332.c5
- McIntyre, J. A. (2010). The need for HIV prevention interventions for men who have sex with men in Africa. *Sexually transmitted infections*, 86(2), 82-83. doi:10.1136/sti.2009.041640
- Miller, W., & Rollnick, S. (2002). *Motivational Interviewing: preparing people for change* (2^e éd.). London: Guildford Press.
- Mocnik, D. (2010). Factors that impact Internet use and are sensitive to income: cross-country empirical evidence. *Drustvena istraživanja*, 19(3), 333-354.
- Niang, C. I., Tapsoba, P., Weiss, E., Diagne, M., Niang, Y., Moreau, A. M., Gomis, D., et al. (2003). 'It's raining stones': stigma, violence and HIV vulnerability among men who have sex with men in Dakar, Senegal. *Culture, Health & Sexuality*, 5, 499-512. doi:10.1080/1369105031000152715
- Ogilvie, G. S., Taylor, D. L., Trussler, T., Marchand, R., Gilbert, M., Moniruzzaman, A., & Rekart, M. L. (2008). Seeking sexual partners on the internet: a marker for risky sexual behaviour in men who have sex with men. *Canadian Journal of Public Health. Revue Canadienne De Santé Publique*, 99(3), 185-188.
- Parker, R., Khan, S., & Aggleton, P. (1998). Conspicuous by their absence? Men who have sex with men (msm) in developing countries: Implications for HIV prevention. *Critical Public Health*, 8, 329-346. doi:10.1080/09581599808402919
- Pathela, P., Blank, S., Sell, R. L., & Schillinger, J. A. (2006). The importance of both sexual behavior and identity. *Am J Public Health*, 96(5), 765. doi:10.2105/AJPH.2005.079186
- Rogers, C. (1957). The necessary and sufficient conditions for therapeutic personality change. *Journal of Consulting Psychology*, 21, 95-103.
- Rosser, B. R. S., Oakes, J. M., Horvath, K. J., Konstan, J. A., Danilenko, G. P., & Peterson, J. L. (2009). HIV sexual risk behavior by men who use the Internet to seek sex with men: results of the Men's INternet Sex Study-II (MINTS-II). *AIDS and Behavior*, 13(3), 488-498. doi:10.1007/s10461-009-9524-3
- The Global Fund. (2009). *The Global Fund strategy in relation to sexual orientation and gender identities.* Geneva, Switzerland.
- Davidovich, U., De Wit, J., & Stroebe, W. (2004). *The effect of an Internet intervention for promoting safe sex between steady male partners— results and methodological implications of a longitudinal randomized controlled trial online.* Présenté à International AIDS conference, Bangkok, Thailand.
- UNAIDS. (2009). *Action Framework: Universal Access for Men who have Sex with Men and Transgender People.* Geneva, Switzerland.

- Van Griensven, F. (2007). Men who have sex with men and their HIV epidemics in Africa. *AIDS (London, England)*, 21(10), 1361-1362. doi:10.1097/QAD.0b013e328017f868
- Wade, A., Kane, C. T., Diallo, P. A. N., Diop, A. K., Gueye, K., Mboup, S., Ndoye, I., et al. (2005). HIV infection and sexually transmitted infections among men who have sex with men in Senegal. *AIDS (London, England)*, 19(18), 2133-2140.
- Walsh, Christopher S.; Lasky, Bruce A. and Morrish, Wendy J. (2011). Building local capacity to protect public health and promote social justice through online peer education. In: IADIS International Conference e-Democracy, Equity and Social Justice 2011, part of the IADIS Multi Conference on Computer Science and Information Systems 2011, 20-22 July 2011, Rome, Italy.
- Walsh, C. & Singh, G. (2012). Building the HIVe: Disrupting Biomedical HIV/AIDS Research with Gay Men, Other MSM and Transgenders. AERA 2012.
- Xu, F., Sternberg, M. R., & Markowitz, L. E. (2010). Men who have sex with men in the United States: demographic and behavioral characteristics and prevalence of HIV and HSV-2 infection: results from National Health and Nutrition Examination Survey 2001-2006. *Sexually Transmitted Diseases*, 37(6), 399-405. doi:10.1097/OLQ.0b013e3181ce122b
- Young, R. M., & Meyer, I. H. (2005). The trouble with « MSM » and « WSW »: erasure of the sexual-minority person in public health discourse. *American Journal of Public Health*, 95(7), 1144-1149. doi:10.2105/AJPH.2004.046714

Biographical Statements

Emilie Henry is the community-based research (CBR) programme manager of Coalition PLUS, an international union of NGOs fighting HIV and AIDS in ten countries (Mali, Morocco, DRC, Burkina Faso, Burundi, Ecuador, Romania, France, Switzerland and Canada). Her fields of interest are community health, community mobilisation and capacity building. Emilie holds a master in Political Science and is currently studying for a master in Public Health at the London School of Hygiene and Tropical Medicine.

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Yves Yomb is from Cameroon and has been involved for years in the fight for human rights and access to care of sexual minorities in his country and in Sub-Saharan Africa. Yves is now the Executive Director of *Alternatives-Cameroon* after being involved in the organisation as the coordinator of the sexual health and prevention unit between 2007 and 2010. He took part to several studies on the legal and HIV and AIDS risks faced by gay men and others MSM in Cameroon. He is often involved as a peer trainer in capacity building of sexual minorities' organisations in Western and Central Africa and a frequent panellist in conferences and symposiums with a focus on gay men and others MSM in francophone Africa.

Lionel Fugon was born in Aix en Provence. He received the M.Sc degree in statistics from the National Institute for Applied Sciences (INSA Toulouse) in 2007. He is currently a statistician at the French National Institute for Medical Research. His research field is HIV epidemiology and research interests include sexual risk behaviour, drug use, adherence to HAART.

Dr Bruno Spire holds a position of research Director in the French National Institute for Medical Research and is the President of *AIDES*, a French HIV NGO. Bruno Spire was trained as Medical Doctor in Paris. He obtained his PhD in Virology in Paris in 1990. In 1998, he turned his research to Public Health issues. He is a researcher living openly with HIV. He has led a large number of studies on patient's adherence, on determinants of patient's quality of life in the ART era and on sexual behaviours of PLWHA.

¹ Including Burundi 2009 and Uganda in 2010. Rwanda and the DRC recently discussed the framework for a law criminalizing sexual relationships between same sex people. A declaration by the Kenyan Prime Minister in November 2010 asked for that country's existing but unenforced law to be rigorously applied, and MSM arrests to be made.

² Penal Code (Law No. 65-LF-24 12th November 1965 and Law No. 67-LF-1 12th June 1967) Homosexuality : « Any person who has sexual relations with a person of the same sex is punishable with imprisonment from six months to five years and a fine of 20,000 to 200,000 Francs (*between 30 and 305 Euros*)