HHS Public Access

Author manuscript

Arch Sex Behav. Author manuscript; available in PMC 2018 May 01.

Published in final edited form as:

Arch Sex Behav. 2017 May ; 46(4): 1035–1046. doi:10.1007/s10508-015-0665-3.

Development and open pilot trial of an HIV prevention intervention integrating mobile phone technology for male sex workers in Chennai, India

Beena Thomas, PhD[1], **Elizabeth F. Closson, MSc**[2,3], **Katie Biello, PhD**[2,4,5], **Sunil Menon**[6], **Pandiaraja Navakodi**[1], **A. Dhanalakshmi**[1], **Kenneth H. Mayer, MD**[2,7,8], **Steven A. Safren, PhD**[2,9], and **Matthew J. Mimiaga, ScD**[2,4,5,10]

[1]National Institute for Research in Tuberculosis, Chennai, India

[2]The Fenway Institute, Fenway Health, Boston, MA, USA

[3]London School of Hygiene and Tropical Medicine, London, UK

[4]Brown University School of Public Health, Department of Behavioral and Social Sciences, Providence, RI, USA

[5]Brown University School of Public Health, Institute for Community Health Promotion, Providence, RI, USA

[6]Sahodaran, Chennai, India

[7]Harvard Medical School/Beth Israel Deaconess Medical Center, Division of Infectious Diseases, Boston, MA, USA

[8]Harvard School of Public Health, Department of Global Health and Population, Boston, MA USA

[9]University of Miami, Department of Psychiatry, Miami, FL, USA

Abstract

In India, men who have sex with men and engage in sex work (i.e., male sex workers; MSW) have a high risk of transmitting HIV. Globally, sex workers have become more spatially mobile due to advances in mobile phone technology. In 2012, in-depth qualitative feedback was garnered from 40 interviews with MSW and four focus groups with 35 key informants (KI) who had expert knowledge of the local MSW community to inform the design of an HIV prevention intervention among MSW in Chennai, India. All MSW were recruited during outreach by employees of a Chennai-based organization for MSM. The data were analyzed using a descriptive qualitative approach. MSW and KI discussed the need for intervention content that went beyond basic HIV psychoeducation. They emphasized the importance of addressing psychological distress, alcohol-related risk and sexual communication skills. Concerns were raised about confidentiality, privacy and scheduling. Participants endorsed a combination of in-person and mobile phone-delivered sessions as well as the integration of mobile phone messaging. These findings served as the basis for the development of a theoretically driven, manual-based intervention incorporating mobile

[10]To whom correspondence should be addressed at Brown University School of Public Health, Institute for Community Health Promotion, 121 South Main Street, 8th Floor, Providence, RI, USA; matthew_mimiaga@brown.edu.

phones. An open pilot assessed the feasibility and acceptability of the intervention with 8 MSW. Assessments and HIV testing were administered at baseline, three, and six months post-baseline. Exit interviews were conducted at the conclusion of the intervention. Retention for session attendance and assessment follow-up was 100%. There was a high level of acceptability for the format, structure and content. These data show initial promise, feasibility and acceptability of the intervention.

Keywords

Sex work; India; MSM; HIV; sexual risk

Introduction

India accounts for 51.0% of HIV infections in Asia and has the third greatest number of people living with HIV globally (2.1 million people) (UNAIDS, 2014). With an estimated HIV prevalence 14 times higher than that of the country's general population (0.31 vs. 4.4%, respectively), Indian men who have sex with men (MSM) are disproportionately affected by HIV (Brahmam, et al., 2008; NACO, 2012; Setia et al., 2008; Thomas et al., 2011).

Men who have sex in exchange for money, gifts or favors (i.e., male sex workers; MSW) are considered a significant but invisible high-risk sub-population of MSM in India (NACO, 2012).While national prevalence estimates of MSW are poorly characterized, available research suggests that they have an elevated burden of HIV and sexually transmitted infections (STI). In a study of 75 MSW in Mumbai conducted by Shinde et al. (2009), 32.0% were diagnosed with a clinical STI and 33.0 % were infected with HIV. This is more than double the prevalence of HIV(12.5%) observed among a sample of 831 MSM seeking HIV testing services in Mumbai who were not paid for sex (Kumta et al., 2010). The acquisition of HIV/STI in Indian MSW is linked with multiple sexual risk behaviors, including large numbers of concurrent sexual partners and inconsistent condom use with both paying and non-paying sex partners (Mimiaga et al., 2010; Newman, Chakrapani, Cook, Shunmugam, & Kakinami, 2008; Shinde et al., 2009; Thomas et al. 2015).

The sexual identities associated with same-sex sexual behavior among men in India have been well delineated and include: (1) *kothis* (feminine appearing, generally sexually receptive partners); (2) *panthis* (masculine, generally sexually insertive partners); and (3) *double-deckers* (both insertive and receptive partner). The vast array of categories reflects the fluidity of sexuality that is untethered to gender expectations for Indian men (Asthana & Oostvogels 2001; Boyce 2007). All sub-groups of India MSM are known to engage in sex work; however studies have shown that paid sex is most commonly associated with the *kothi* identity (Narayanan et al., 2013; Newman et al., 2008; Thomas et al. 2015). There is a high degree of heterogeneity among Indian MSW in terms of socio-demographic characteristics. According to available research, in Chennai, the majority are in their 20s and 30s, are unmarried and have less than a secondary school education. While sex work may not necessarily be their primary source of income, most MSW are motivated to sell sex out of economic need—linked to either underemployment or low wages (NMISW 2005; Thomas et

al. 2015; WHO, 2003). Venues for sex work solicitation in Chennai include brothels, hotels, massage parlors and public cruising areas for MSM (WHO, 2003). According to findings from the present study, a large number of MSW also use mobile phones to connect with clients.

Globally, advances in mobile phone technology have altered the organization and conditions of sex work (Campbell & O'Neill, 2006; Minichiello & Scott, 2015; Ward & Aral, 2006). In many contexts, the use of mobile phones for solicitation is replacing physical venues such as red light districts and brothels (Hubbard, P., 2004; Ward & Aral, 2006). In facilitating the spatial mobility of sex work, mobile phones offer sex workers a layer of protection in terms of safety and anonymity (Maher, Pickering & Gerard, 2012). The use of mobile phones may give sex workers more independence, but it also has the potential to isolate individuals and erode social support networks (Aral, St. Lawrence, & Uuskula, 2006; Aral, et al., 2003). While there is a paucity of existing data on mobile phone use by MSW in India, it has been well established that mobile phones play a critical role in solicitation among female sex workers (Beattie, Bradley, Vanta, Lowndes, & Alary, 2013; Buzdugan et al., 2010; Mahapatra, Saggurti, Halli, & Jain, 2012; Navani-Vazirani et al., 2015; Sariola, 2010). Findings from the present study indicate that mobile phones are commonly used by MSW in Chennai to communicate with clients, peers, and family members.

There is a growing body of literature investigating the use of *mHealth*—the practice of medicine and public health by mobile phone technology—for HIV prevention and treatment (Catalani, Philbrick, Fraser, Mechael, & Israelski, 2013). Several interventions for high-risk MSM have been developed and tested. A systematic review by Schnall and colleagues (2014) found preliminary evidence of mHealth HIV prevention tools for high-risk MSM being associated with reductions in high risk behaviors and increases in HIV testing rates. Among a sample of 714 Australian MSM who recently tested for HIV, individuals who received text message reminders for follow-up testing were 4.4 times more likely to re-test than those who did not receive the messages (Bourne et al., 2011). Similarly, a pilot of an intervention that sent risk-reduction text messages to 52 high-risk MSM in the United States reported fewer episodes of unprotected anal intercourse than in the pre-treatment period (Reback et al, 2012). Although the science and practice of mHealth for HIV prevention among MSM is still in the incipient stage, existing research reveals a promising trend toward positive outcomes.

With a teledensity of more than 75% (TRAI, 2014), India is a setting that could benefit tremendously from the scale-up of mHealth interventions (Swendeman 2013). Studies of mHealth HIV prevention interventions for MSM in India are currently underway. From 2013–2014, a pilot was conducted of a confidential mobile phone hotline that provided counseling and HIV testing and care referral to Indian MSM called *Sahaay*. Over a nine month period the helpline received calls from nearly 40,000 MSM—46.0% of which called on multiple occasions. 93.0% of callers received information about HIV/STI, 39.0% referrals for health facilities and 27.0% counseling from a trained operator. As compared to accessing these services in a physical venue, callers reportedly preferred the mobile phone delivery platform because it was more convenient and provided them with greater flexibility in terms of timing and location (Agarwal et al., 2015). The high levels of acceptability and

feasibility of *Sahaay* suggest that mobile phones may be a valuable delivery tool for HIV prevention interventions targeting MSM.

Limited HIV prevention interventions have been developed and tested specifically for MSW (Ziersch, Gaffney, & Tomlinson, 2000; Williams, Bowen, Timpson, Ross, & Atkinson, 2006) However, formative work suggests that brief, targeted interventions using a harm reduction approach may be most effective in this population (Baral et al., 2015). As such, there may be particular benefits of using mobile phones in an HIV prevention intervention for MSW. Integrating a technology that sex workers regularly use has the potential to enhance their level of engagement and comfort. Speaking to an intervention counselor on a mobile phone may alleviate some of the challenges encountered in traditional face-to-face meetings such as transportation, wait times, and public visibility. Moreover, sending tailored messages to mobile phones at previously identified periods of elevated risk such as weekend evenings may prove effective in helping MSW avoid risk triggers (e.g., consuming alcohol) and implement HIV/STI risk reduction strategies (e.g., condom use).

The high levels of sexual risk behaviors and HIV/STI prevalence among MSW in India indicate that there is a gap in HIV prevention designed specifically for this population. In order to be effective, HIV prevention programming should be developed with considerable input from MSW and take into consideration the local social and structural context in which they live and work (Baral et al. 2014). Informed by in-depth qualitative feedback from MSW and key informants (KI) from the MSM community, the present study developed and piloted an HIV prevention intervention integrating mobile phone technology for MSW in Chennai, India. Feasibility and acceptability of the intervention were then tested in a small open pilot.

Methods

In 2012, individual interviews with MSW (n = 40) and focus groups with KI who had first-hand knowledge of the local MSW community (n = 35) were conducted in Chennai, India. The purpose of the interviews and focus groups was to garner feedback to inform the content and structure of a future HIV prevention intervention for MSW. Based on these qualitative findings, we designed a theoretically driven, manual-based intervention that integrated mobile phone technology. To assess the feasibility and acceptability of the intervention, an open pilot was conducted with eight MSW in 2013. The protocols for both phases of the study were approved by the Indian Council of Medical Research/National Institute for Research in Tuberculosis (NIRT) Institutional Ethics Committee and the Fenway Health Institutional Review Board.

Qualitative Intervention Development Phase

MSW who participated in an individual qualitative interview were born biologically male, over the age of 18, and reported condomless anal intercourse (receptive or insertive) with another other man in exchange for money, goods, favors or gifts during the three months prior to study enrollment. KI identified as MSM and were engaged in health promotion and social advocacy efforts for sexual minorities in Chennai. All of them had first-hand experience working with the local MSW community. With their particular knowledge of MSW in Chennai and expertise in health promotion efforts, KI provided valuable insights

and recommendations. Recruitment for MSW was conducted at Sahodaran, a Chennai-based non-governmental organization that offers HIV related prevention, care and support programs to MSM. Sahodaran staff provided information about the study to MSM clients during regular street-based outreach activities at popular cruising sites in Chennai. Those who were interested in participating were then contacted by a member of the research team. As part of the recruitment process, MSW were informed that refusal or withdrawal of participation in the study would not affect their ability to receive services at Sahodaran or NIRT. KI were selected by the Indian PI with input from staff at Sahodaran. Following established qualitative research practice (Miles & Huberman, 1994), recruitment for interviews and focus groups continued until the content reached redundancy (i.e., no new concepts could be identified).

Study procedures took place in a private room at the NIRT office in Chennai and were conducted in Tamil by a research staff member with training in qualitative methods and group facilitation and the first author (BT). All participants completed a written informed consent process before data collection commenced. They received 250 Rupees (approximately $5 USD) as reimbursement for their time.

For the interviews, MSW were given a brief interviewer-administered demographic questionnaire. This was followed by a 60–80 minute individual interview. KI participated in a focus group of similar length with six to 12 people per group. Both interviews and focus groups were audio recorded, transcribed verbatim and then translated into English by NIRT staff. For quality control purposes, audio recordings were regularly reviewed by Indian investigators to review data and identify areas of improvement.

Interviews and focus groups were guided by a pre-established set of questions and optional scripted probes. The domains were the same for both guides; however, the questions were tailored to the individual or group dynamic. Additional questions were added throughout the course of the study in order to explore emerging themes (Lindlof & Taylor, 2002). The guides covered the following three domains: (1) Services and intervention content—questions about the need for services and intervention topics that could support HIV risk reduction among MSW (e.g., *What services are needed for MSW in Chennai?; If we were to provide a programme to help MSW reduce their risk of getting HIV, what would be important to include*?); (2) Intervention format—elicited suggestions and preferences on the format of intervention sessions (e.g., in-person sessions and mobile-phone sessions), mobile phone messaging as well as the feasibility and acceptability of voluntary HIV testing and counseling (e.g., *How willing would you be to attend a session with other men who get paid for sex?; What are some of the advantages and disadvantages of receiving messages to a mobile device*?); and (3) Foreseeable challenges—questions related to potential problems that might arise when implementing an intervention for MSW (e.g., *What challenges might arise for someone in attending in-person sessions?;Why might someone might be concerned about receiving messages to their mobile phone?*).

Qualitative data were analyzed using a qualitative descriptive analysis methodology (Sandelowski, 2010). Initial themes were based on the questions from the qualitative interview guides. These concepts were used by the research team to construct categories and

to develop a code book (Silverman, 2010). Transcripts were reviewed for errors and organized categorically by a single coder using Atlas *ti* qualitative analysis software. For the purposes of establishing reliability, several coding stability assessments were conducted to ensure that the coder was consistently re-coding the same data in the same way over a period of time (Weber, 1990). Analytic memos across and within-cases were used to reflect on connections between cases and crystalize ideas about emerging themes.

Open Pilot to Assess Feasibility and Acceptability of the Intervention

The eligibility criteria and recruitment methods for eight MSW who participated in the open pilot trial were the same as in the qualitative intervention development phase. None of the MSW interviewed as part of the qualitative stage participated in the intervention pilot. Study visits took place in a private room at the NIRT office in Chennai and were conducted by a trained research staff member and first author (BT). All participants completed a baseline questionnaire assessing risk factors for HIV, including but not limited to sexual behaviors, sex work experiences, stigma, and depression. Measures had been used in previous studies with MSM in Chennai and were translated and back-translated by the study team in Chennai. These questionnaires were interviewer-administered; however, because of the sensitive nature of the questions, the sexual risk behavior questions were assessed using audio computer-assisted self-interviews in Tamil. Participants were offered free voluntary HIV testing and counseling conducted by a trained counselor at the time of the study visit. These procedures were repeated at the three and six month follow-up visits. Moreover, at the three month follow-up visit, exit interviews were conducted to obtain feedback on the intervention with regards to format and content. Counseling sessions were administered by a research team member with postgraduate-level training in social work. A written informed consent process was completed before study procedures began. For the completion of intervention sessions and follow-up visits, participants received up to 250 Rupees for each visit (approximately $5 USD), for a total of up to 1,250 Rupees (approximately $25 USD). The amounts were based on input from MSW and KI involved in the qualitative phase of the study. Further details of the methods of the open pilot test of the intervention are described below.

Results

Findings from the Qualitative Intervention Development Phase

Table 1 provides demographic and sexual risk characteristics of the 40 MSW interviewed as part of the intervention development phase of the study. Their mean age was 31.9 (SD = 8.5) and they reported engaging in sex work for an average of nine years (SD = 10.1). In terms of sexual identity, *kothis* (80.0%) and *double-deckers* (17.5%) comprised the majority of the sample. The number of participants with a negative HIV sero-status was 82.5%. The remaining 17.5% were of unknown sero-status because they refused voluntary HIV rapid testing and counselling services.

The qualitative results are structured according to four topics: (1) Suggestions for future services and intervention content; (2) Preferences and suggestions for intervention format

and structure; (3) Foreseeable challenges; and (4) Intervention Design. Boxes 1 through 3 present example quotations illustrating themes and sub-themes on the first three topics.

Suggestions for future services and intervention content—MSW and KI were asked to suggest services and counseling topics that could support sexual risk reduction among MSW in Chennai. Citing HIV message fatigue, participants from both groups emphasized the importance of approaches that go beyond basic HIV psychoeducation. However, many KI said that it would be helpful to provide information about specific topics that were not clearly understood by MSW or inadequately covered in existing programs. These included STI and TB symptoms and treatment, the HIV seroconversion "window period", and sexual lubricants. To facilitate safe sex, many MSW and KI spoke about need to address sexual communication and negotiation with clients, particularly around condom use and financial incentives for condomless sex. Participants from both groups wanted the intervention to target alcohol-related issues such as managing drunk client behavior and condom use if one or both parties were drinking. Psychological distress prompted by experiences of stigma and low self-esteem was also suggested an intervention topic in several interviews and focus groups. Finally, several MSW and KI and described a gap in job training services for MSW. It was suggested that learning vocational skills such as hair dressing and cooking would enable men to earn income from sources other than sex work (see Box 1).

Preferences and suggestions for intervention format and components—In terms of intervention sessions, interviews and focus groups elicited feedback on two different delivery methods—in-person and mobile phone-based sessions. Across interviews and focus groups, in-person meetings were thought to be more preferable than speaking on a mobile phone with a counselor. Many said that MSW would be more willing to discuss sensitive topics in-person and would value the in-person interaction. However, it was also suggested that mobile phone sessions would be acceptable if MSW were given the chance to develop a personal connection with the counselor beforehand. The interviews and focus groups also revealed several positive aspects of the mobile-phone based sessions. A substantial number of MSW and KI emphasized the convenience of sessions conducted because they could be conducted anywhere and provided more flexibility in terms of scheduling. Some MSW also cited the potential for mobile phone sessions to minimize public visibility and enhance privacy. Several MSW and all of the KI emphasized the potential value in a combination approach.

For in-person sessions, the majority of KI and MSW endorsed one-on-one sessions over a group-based format because they thought MSW would be more willing to discuss confidential information in a private setting. While the individual session format was preferable, a few KI noted that the group sessions would enable MSW to share and learn from others' experiences. When asked about the desired qualities of an intervention counselor, most underscored the importance of having someone who was familiar with the MSM community in Chennai. Although the majority of KI and MSW recommended an interventionist that was familiar with MSM, counselors from within the community (i.e.,

peers) were not necessarily looked upon favorably by all MSW. Some suggested that issues with confidentiality and power struggles would arise.

Besides the intervention sessions, MSW and KI were asked to provide feedback on two additional components of the intervention: mobile phone messaging and free voluntary HIV testing and counselling. When queried about the perceived utility and acceptability of mobile phone messages as part of a future intervention, concerns were raised about the potential for others to see text messages with explicit information in them. It was suggested by both groups that text messages contain code words that were commonly used by MSW in the community, including *dhanda* (sex work), *chocolate* (condom) *taper* (money), and *gans* (anal sex). While all MSW participants said that they frequently used their mobile phones to communicate with peers and clients, text messages was not a common mode of communication. The overwhelming majority of MSW had difficulty reading text messages in English. For a few, reading text messages in Tamil or Hindi characters was also a challenge. KI had similar concerns about some MSW being able to read text messages. It was suggested that voice messages (e.g., voicemails) would be a good alternative to text messages.

Participants were also asked about whether MSW would be willing to receive free voluntary HIV testing and counseling as part of the study. Responses from both groups almost exclusively affirmed that MSW would consent to testing. A few KI pointed out that some MSW may have recently been tested at another testing venue in the city and may not think it necessary to be tested again as part of the study (see Box 2).

Foreseeable challenges—Focus group and interview data highlighted some important practical concerns about conducting an intervention with MSW. For example, time constraints and scheduling conflicts were identified by the majority of MSW and KI as barriers to attending in-person sessions. As such, many cited the time-saving advantage of a program delivered via mobile phone. In order to limit the time commitment of the intervention, most participants thought that the in-person sessions should last between one and two hours and be held two to three times a month. In addition to these logistical barriers, a small handful of MSW and KIs mentioned the potential for social harm. Specifically some worried about stigmatizing responses from families if their involvement in the intervention was revealed. They emphasized the importance of maintaining confidentiality and privacy (see Box 3).

Intervention design - format—Based on the findings reported above, previous research done by the study team (Mimiaga et al., 2011; Thomas et al., 2011; Thomas et al., 2012; Thomas et al., 2009), and existing literature on Indian MSW (NMISW 2005; WHO 2003; Newman et al., 2008; Shinde et al., 2009), we developed an HIV prevention intervention integrating mobile phone technology for MSW in Chennai. The delivery of the intervention was guided by a scripted manual which included worksheets and handouts for participants.

The intervention includes two in-person sessions and 2 mobile phone sessions. The sessions take place over a four week period—one session per week for four consecutive weeks. They are conducted in Tamil by a counselor with post-graduate-level training in social work. All

sessions are one-on-one. The in-person sessions are held in weeks one and three and last between 60 and 90 minutes. The two mobile phone sessions occur in weeks two and four and are 15 to 20 minutes in duration. Additionally, two brief "booster" mobile phone sessions are provided in weeks eight and 12 in order to reinforce the content provided in the intervention. Concerns about confidentiality during mobile phone sessions are addressed by keeping these discussions brief and by scheduling them at a time when the participant knows he will be able to speak in-private.

For the mobile phone messaging component, at the end of the first in-person session participants choose seven messages from a list of 16. The counselor and participant discuss how best to tailor the messages according to their individual preferences and sexual health goals. Messages are intended to be motivational, build positive self-image, and remind participants about their personal sexual health goals. Sample mobile phone messages are provided in Table 2. Several steps are taken to minimize breaches in confidentiality and reduce the risk of social harm. The messages contain words from the special lexicon used by MSW in Chennai and do not make direct reference to potentially sensitive topics such as HIV or sex. As a further precaution, the first in-person session includes a discussion and role-play exercise about responding to questions from family or friends who see the messages. Because of different levels of literacy, participants have the option of receiving Tamil-script text messages or pre-recorded voice messages in Tamil. Through an automated system, the messages are sent to participants' mobile phones on a daily basis for a 12 week period.

Intervention design – session content—Informed by empowerment theory (Crossley, 2001; Wallerstein, 2002), the intervention sessions focuses on developing personal strategies to facilitate greater control over sexual decision-making and promote sexual health in the context of sex work. The in-person sessions are designed to cover new material and facilitate in-depth discussions while the mobile phone sessions are for shorter "check-ins" and to role play scenarios that allow participants to practice some of the skills covered in the previous week. The content of the intervention is described in detail in Table 2.

In recognition of the issue of HIV messaging fatigue described in the qualitative data, the central concept of the intervention is sexual health promotion rather than HIV prevention. As the counselor explains in the first session, "Sexual health is a state of physical emotional, mental and social well-being related to sexuality; not merely the absence of disease". At the start of the first session, counselors work with participants to identify their personal sexual health goals for the intervention. While it was suggested that basic HIV psychoeducation was not necessary, KI discussed the need for information on specific topics that were not well understood by MSW or inadequately covered in existing programs. Taking into consideration both recommendations, we designed a brief psychoeducation section on HIV, STI and TB that could be tailored to the individual's existing level of knowledge.

Based on the qualitative data, the intervention includes a component on psychological distress related to stigma and low-self-esteem as a "sexual trigger". The participant is encouraged to discuss stigmatizing experience and then collaboratively with the counselor consider ways that psychological distress associated with these experiences may influence

their sexual decision-making. A relaxation and guided imagery tool is introduced to help the participant cope with stress and build a positive self-image. The feedback gleaned from the qualitative stage also informed our decision to include material on alcohol as a "sexual trigger". The counselor engages MSW in a brainstorming activity about the advantages and disadvantages of drinking alcohol. The participant works with the counselor to complete an exercise aimed at developing skills to minimize personal risk in the context of alcohol use. Grounded in the findings from the interviews and focus groups, sexual communication is also a focus of the intervention. The section on this topic begins by discussing the potential benefits of being able to effectively communicate about sex with clients and other sex partners. Next, participants complete an activity that helps them explore some of the reasons why sexual communication was a challenge for them in the past. This is followed by a section on sexual safety negotiation which focuses on facilitating communication skills and strategies that support the participant's ability to negotiate condom use with paying and non-paying sex partners.

At the end of the two in-person sessions, participants work with the counselor to identify a personally relevant problem related to one of the topics, generate alternative solutions, make decisions about the alternatives, and collaboratively decide on a plan regarding how to implement the solutions. Problem-solving training serves to teach individuals how to take an overwhelming task and break it into manageable steps with the goal of reducing cognitive avoidance (D'Zurilla, 1986). The mobile phone sessions are used to review the participants' problem-solving action plans, discuss any challenges they anticipated or experienced in implementing the plans and role-play potential scenarios and solutions.

Findings from the Open Pilot to Assess Feasibility and Acceptability of the Intervention

The entire sample (n = 8) opted to receive HIV testing and counseling at baseline, three and six month follow-up visits. Results were negative for all participants at all time points. At baseline, participants had a median of three (range: 1–10) male clients in the past month. The median was the same at the three month-follow-up; however, out of seven participants with valid data at both time points, four had fewer male clients at three months compared to baseline, two did not change, and one had more clients.

Overall, retention for follow-up and attendance of the intervention sessions was high. All eight participants completed the three month and six month assessments. Additionally, the entire sample completed all of the sessions (both in-person and mobile phone). All participants opted to receive only voice messages or a combination of voice and text messages. Of the 359 attempted voice messages, 242 (67.4%) went through successfully and 100% of the 208 text messages were delivered. Participants did not report any breaches in confidentiality during the mobile phone intervention sessions or messages.

Exit interviews revealed that the format was engaging and that the content was both useful and relevant. Citing the high prevalence of tuberculosis in Chennai, some participants recommended that a module on tuberculosis be included in the intervention. Additionally, participants suggested a few additional mobile phone messages be added to the list of options.

Discussion

Findings from this two-phase study describe the development and open-pilot trial of a technology-based, mobile phone delivered HIV prevention intervention for male sex workers in Chennai, India. To our knowledge this is the first HIV prevention intervention for reducing sexual risk behaviors among MSW in India using mobile phone technology as a platform for intervention delivery.

Qualitative data revealed that some MSW were disinterested in existing HIV prevention messages about condom use and disease transmission. HIV message fatigue is a relatively new phenomenon among Indian MSM and may present distinct challenges for safe sex promotion. To actively engage the population, it was critical that a future intervention directly reflect their concerns. The feedback and suggestions collected in the qualitative phase of the study were therefore essential to the intervention development process. The benefits of this stepped approach to intervention development are well documented in the public health literature (Ayala & Elder, 2011; Bartholomew, Parcel, Kok, Gottlieb, & Fernandez, 2011).

In discussions about the need for interventions that went ‘beyond’ basic safe sex messages, participants referred to difficulties with sexual communication and negotiation, particularly in the context of alcohol use. In consideration of these findings, the intervention was guided by the concept of sexual health promotion. Counselors worked collaboratively with participants to identify personal goals for sexual health and then focused on developing and practicing a range of techniques aimed at empowering them to exert greater control over sexual decision-making and promote sexual health. These skills included learning how to engage in healthy discussions about condom use, navigating disagreements with sex work clients, and minimizing sexual risks associated with sex work environments, alcohol use, and psychological distress. As with all aspects of the intervention, to ensure that the strategies were personally relevant and developed in the context of real-world situations, participants were encouraged to think critically about how they could be tailored to better fit their own experiences.

MSW and KIs highlighted several concerns that were helpful to keep in mind as we developed the format of the intervention. In general, in-person sessions were preferable for discussing sensitive information, both in terms of feeling comfortable with the interventionist and for confidentiality. However, speaking on the mobile phone was considered acceptable especially if the first intervention session was conducted in-person. Many participants emphasized the convenience and time-saving aspects of mobile phone sessions. In light of this feedback, we developed a four session intervention with an equal number of in-person and mobile phone meetings. Participants were offered a range of options for receive mobile phone messages. This allowed us to accommodate different levels of literacy and provide access to the messages in a way that best suited participants’ existing patterns of mobile phone use.

The results of the open pilot provide promising initial evidence of the feasibility and acceptability of a technology-based, mobile phone delivered HIV prevention intervention for

male sex workers in Chennai, India. Findings point to a high level of retention for the in-person and mobile phone sessions. The delivery success rates of the text and voice messages indicate that there were few technical or logistical barriers to this component of the intervention. Exit interviews revealed that participants were engaged by the content, structure and format of the intervention. Given the small sample size and non-randomized design, this study was not designed to establish efficacy. However, the data from the open pilot suggest that the intervention shows very-preliminary promise in reducing sexual risk for HIV and STI among MSW in Chennai.

When interpreting these results, the following limitations should be considered. First, the open pilot was small and utilized a non-randomized design. Second, samples for both phases of the study were recruited by outreach workers from Sahodaran and may therefore represent a group of MSW that are more engaged in outreach services than other segments of the population. Third, social desirability bias may have led participants in the open pilot to speak more positively about their experience of the intervention during the exit interviews. This may also have been a factor in shaping qualitative participant's suggestions for components of a future intervention. To minimize the potential for these biases, participants were continuously reminded that there were no right or wrong answers and that it was important to provide honest responses. Finally, in both phases of the study *sex work* was defined quite broadly as "sex in exchange for money, gifts or favors". The definition is broad and may capture a population with diverse socio-demographic characteristics and risk behaviors. Narrowing the definition or distinguishing between different types of transactional sex (e.g., sex-for-cash, drugs, shelter, transport, etc.) may be beneficial in future studies (Baral et al., 2015).

India has one of the largest populations of mobile phone users in the world. As in other settings, our findings indicate that MSW in India increasingly rely on the use of mobile phones in sex work solicitation. Capitalizing on this shift in communication medium, we integrated mobile phone technology into an intervention to reduce sexual risk among MSW in Chennai. The intervention was developed with considerable in-depth feedback from MSW and KIs from the community. The qualitative phase of the study played a critical role in ensuring that the content, structure and format of the intervention was engaging and acceptable to participants while also being practical to implement. These qualitative and open pilot trial data show initial promise, feasibility of procedures, and acceptability of a technology-based, mobile phone delivered HIV prevention intervention that reflects the priorities and needs of the MSW community in Chennai. The next step involves further pilot testing using a larger randomized controlled trial (RCT) design to determine more accurate effect size estimates, and ultimately a full-scale RCT efficacy trial.

Acknowledgments

The current project was supported by the Indo-U.S. Joint Working Group on Prevention of Sexually Transmitted Diseases and HIV/AIDS through U.S. National Institute of Drug Abuse grant #R21DA033720 (Matthew Mimiaga, PI) and Indian Council of Medical Research grant #Indo-U.S/72/9/2010-ECDII (Beena Thomas, PI).

REFERENCES

Agarwal A, Hamdallah M, Swain SN, Mukherjee S, Singh N, Mahapatra S, Thior I. Implementation of a confidential helpline for men having sex with men in India. Journal of Medical Internet Research. 2015; 3:e17.

Aral SO, St. Lawrence JS, Uuskula A. Sex work in Tallinn, Estonia: The sociospatial penetration of sex work into society. Sexually Transmitted Infections. 2006; 82:348–353. [PubMed: 16807288]

Aral SO, Lawrence JSS, Tikhonova L, Safarova E, Parker KA, Shakarishvili A, Ryan CA. The social organization of commercial sex work in Moscow, Russia. Sexually transmitted diseases. 2003; 30:39–45. [PubMed: 12514441]

Asthana S, Oostvogels R. The social construction of male 'homosexuality'in India: implications for HIV transmission and prevention. Social Science & Medicine. 2001; 52:707–721. [PubMed: 11218175]

Ayala GX, Elder JP. Qualitative methods to ensure acceptability of behavioral and social interventions to the target population. Journal of Public Health Dentistry. 2011; 71(Suppl. 1):69–79.

Baral SD, Friedman MR, Geibel S, Rebe K, Bozhinov B, Diouf D, Cáceres CF. Male sex workers: practices, contexts, and vulnerabilities for HIV acquisition and transmission. The Lancet. 2015; 385:260–273.

Bartholomew, LK., Parcel, GS., Kok, G., Gottlieb, NH., Fernandez, ME. Planning Health Promotion Programs: An Intervention Mapping Approach. San Fancisco, CA: John Wiley & Sons; 2011.

Beattie TS, Bradley JE, Vanta UD, Lowndes CM, Alary M. Vulnerability re-assessed: the changing face of sex work in Guntur district, Andhra Pradesh. AIDS Care. 2013; 25:378–384. [PubMed: 22783833]

Bourne C, Knight V, Guy R, Wand H, Lu H, McNulty A. Short message service reminder intervention doubles sexually transmitted infection/HIV re-testing rates among men who have sex with men. Sexually Transmitted Infections. 2011; 87:229–231. [PubMed: 21296796]

Boyce P. 'Conceiving kothis': Men who have sex with men in India and the cultural subject of HIV prevention. Medical Anthropology. 2007; 26:175–203. [PubMed: 17469015]

Buzdugan R, Copas A, Moses S, Blanchard J, Isac S, Ramesh BM, Cowan FM. Devising a female sex work typology using data from Karnataka, India. International Journal of Epidemiology. 2010; 39:439–448. [PubMed: 19995861]

Brahmam GN, Kodavalla V, Rajkumar H, Rachakulla HK, Kallam S, Myakala SP. Sexual practices, HIV and sexually transmitted infections among self-identified men who have sex with men in four high HIV prevalence states of India. AIDS. 2008; 22(Suppl. 5):45–57.

Campbell, R., O'Neill, M., editors. Sex work now. Devon, UK: Routledge; 2013.

Crossley ML. The 'Armistead'project: An exploration of gay men, sexual practices, community health promotion and issues of empowerment. Journal of Community and Applied Social Psychology. 2001; 11:111–123.

D'Zurilla, TJ. Problem-solving Therapy: A Social Competence Approach to Clinical Intervention. New York: Springer; 1986.

Hubbard P. Cleansing the metropolis: sex work and the politics of zero tolerance. Urban Studies. 2004; 41:1687–1702.

Kumta S, Lurie M, Weitzen S, Jerajani H, Gogate A, Row-kavi A, Mayer KH. Bisexuality, sexual risk taking, and HIV prevalence among men who have sex with men accessing voluntary counseling and testing services in Mumbai, India. Journal of Acquired Immune Deficiency Syndromes. 2010; 53:227–233. [PubMed: 19934765]

Lindlof, TR., Taylor, BC. Qualitative Communication Research Methods. 2nd. Thousand Oaks, CA: Sage Publications; 2002.

Mahapatra B, Saggurti N, Halli SS, Jain AK. HIV risk behaviors among female sex workers using cell phone for client solicitation in India. Journal of AIDS and Clinical Research. 2012; S1:14.

Maher, J., Pickering, S., Gerard, A. Sex work: labour, mobility and sexual services. London: Routledge; 2012.

Miles, MB., Huberman, AM. Qualitative data analysis. 2nd. Newbury Park, CA: Sage Publications; 1994.

Minichiello, V., Scott, J., editors. Male sex work and society. New York, New York: Harrington Park Press; 2014.

Mimiaga, MJ., Thomas, B., Mayer, KH., Johnson, CV., Menon, S., Chandrasekaran, V., Safren, SA. Differential HIV transmission among risk behaviors engaging MSM subgroups sex in transactional Chennai in India. Poster presented at the AIDS 2010 - XVIII International AIDS Conference; Vienna. 2010 Jul 18.

Mimiaga MJ, Thomas B, Mayer KH, Reisner SL, Menon S, Swaminathan S, Safren SA. Alcohol use and HIV sexual risk among MSM in Chennai, India. International Journal of STDs and AIDS. 2011; 22:121–125.

NACO. HIV Sentinel Surveillance, 2010–2011: A Technical Brief. New Delhi: India National AIDS Control Organization; 2012.

Narayanan P, Das A, Morineau G, Prabhakar P, Deshpande GR, Gangakhedkar R, Risbud A. An exploration of elevated HIV and STI risk among male sex workers from India. BMC Public Health. 2013; 13:1059. [PubMed: 24209579]

Navani-Vazirani S, Solomon D, Gopalakrishnan, Heylen E, Srikrishnan AK, Vasudevan CK, Ekstrand ML. Mobile phones and sex work in South India: the emerging role of mobile phones in condom use by female sex workers in two Indian states. Culture, Health & Sexuality. 2015; 17:252–265.

Newman PA, Chakrapani V, Cook C, Shunmugam M, Kakinami L. Correlates of paid sex among men who have sex with men in Chennai, India. Sexually Transmitted Infections. 2008; 1:434–438.

NMISW. Pilot Study on Male Sex Workers in India: Study of MSW in Kolkata, Ahmedabad, and Vijayawada. Kolkata: Network of Male Indian Sex Workers; 2005.

Sandelowski M. What's in a name? Qualitative description revisited. Nursing and Health. 2010; 33:77–84.

Sariola, S. Gender and sexuality in India: selling sex in Chennai. Oxon: Routledge; 2010.

Schnall R, Travers J, Rojas M, Carballo-Diéguez A. eHealth interventions for HIV prevention in high-risk men who have sex with men: A systematic review. Journal of Medical Internet Research. 2014; 16:e134. [PubMed: 24862459]

Setia MS, Brassard P, Jerajani HR, Bharat S, Gogate A, Kumta S, Boivin JF. Men who have sex with men in India: A systematic review of the literature. Journal of LGBT Health Research. 2008; 4:51–70. [PubMed: 19856739]

Shinde S, Setia MS, Row-Kavi A, Anand V, Jerajani H. Male sex workers: Are we ignoring a risk group in Mumbai, India? Indian Journal of Dermatology, Venereology and Leprology. 2009; 75:41–46.

Silverman, D. Doing Qualitative Rsearch: A Pactical Handbook. 3rd. Thousand Oaks, CA: Sage Publications; 2010.

Swendeman D. Are mobile phones the key to HIV prevention for mobile populations in India? The Indian Journal of Medical Research. 2013; 137:1024–1026. [PubMed: 23852282]

Thomas B, Mimiaga MJ, Menon S, Chandrasekaran V, Murugesan P, Swaminathan S, Safren SA. Unseen and unheard: Predictors of sexual risk behavior and HIV infection among men who have sex with men in Chennai, India. AIDS Education and Prevention. 2009; 21:372–383. [PubMed: 19670971]

Thomas B, Mimiaga MJ, Kumar S, Swaminathan S, Safren SA, Mayer KH. HIV in Indian MSM: Reasons for a concentrated epidemic & strategies for prevention. The Indian Journal of Medical Research. 2011; 134:920. [PubMed: 22310824]

Thomas B, Mimiaga MJ, Mayer KH, Closson EF, Johnson CV, Menon S, Safren SA. Ensuring It Works: A Community-Based Approach to HIV Prevention Intervention Development for Men Who Have Sex with Men in Chennai, India. AIDS Education and Prevention. 2012; 24:483–499. [PubMed: 23206199]

Thomas, BT., Biello, KB., Closson, EF., Navakodi, P., Dhanalakshmi, A., Menon, S., Mimiaga, MJ. Transactional sex and the challenges to safer sexual behaviors: a study among male sex workers in Chennai, India. Poster presented at 8th IAS Conference on HIV Pathogenesis; Treatment and Prevention, Vancouver. 2015 Jul 19.

TRAI. The Indian Telecom Services Performance Indicators. New Delhi: Telecom Regulatory Authority of India; 2014.

UNAIDS. Report on the Global AIDS Epidemic Geneva, Switzerland. Geneva: Joint United Nations Programme on HIV/AIDS; 2014.

Wallerstein N. Empowerment to reduce health disparities. Scandinavian Journal of Public Health. 2002; 59:72–77. [PubMed: 12227969]

Ward H, Aral SO. Globalisation, the sex industry, and health. Sexually transmitted infections. 2006; 82:345–347. [PubMed: 17012510]

Weber, RP. Basic content analysis. 2nd. Newbury Park, CA: Sage Publications; 1990.

Williams ML, Bowen AM, Timpson SC, Ross MW, Atkinson JS. HIV Prevention and Street-Based Male Sex Workers: An Evaluation of Brief Interventions. AIDS Education and Prevention. 2006; 18:204–215. [PubMed: 16774463]

WHO. A Rapid Situation Assessment of Sexual Risk Behaviour and Substance Use Among Sex Workers and their Clients in Chennai (Madras), South India. Geneva: World Health Organization; 2003.

Ziersch A, Gaffney J, Tomlinson DR. STI prevention and the male sex industry in London: evaluating a pilot peer education programme. Sexually transmitted infections. 2000; 76:447–453. [PubMed: 11221127]

Box 1. Suggestions for Services and Intervention Content

HIV prevention message fatigue

Where ever we go they speak only about condom usage. Even counseling session deals with risk reduction, HIV pre-test counseling, post-test counseling. But there is no mental health program available. *−12*

Psychoeducation on specific topics

Talking about STI is very important. Usually in many HIV prevention programs they only talk about HIV testing. *−44*

They (MSW) need to be taught about the window period—the time it takes for an HIV test to show up positive. Because sometimes they receive a test and think everything is ok but don't go back for follow-up test. *−16*

MSW are having TB. We should learn about how it is that people get TB and how it can be stopped and care for. *−28*

Safe sex negotiation

Some clients demand sex without condoms saying that they are anyway paying me and I have to do as per their wish and also I don't charge separately for sex without condom use. Sometimes I do feel scared about doing sex without using a condom. So I think negotiation of condom usage for sex workers needs to be talked about. *−12*

Alcohol use and safe sex

I had sex with my client the day before yesterday but I did not consume alcohol while having sex. But before that when I had sex with my client, it was he who wanted us to have alcohol. I visit my client with an intention of coming back very soon, but once if I am drunk it becomes difficult to come out of it and it sex becomes a long process…. Usually it starts with oral sex …But I think we then exceed limits in having sex thereby resulting in different types of sex according to the client's desire. We usually do not use condoms when we consume alcohol. When the clients consume alcohol, they behave in a very wild manner in having sex with me with much more interest and involvement in sex. *−08*

Psychological distress

When we were being hurt by others clients we will feel guilty for being like this. Very bad comment and advice from the clients who had sex with us during such times we will feel bad and guilty about what we are doing. Counseling for this is necessary. *−22*

Vocational training

Job training can be given to sex workers so that they will not be involved in sex work. I am very sure that if such training like cookery is taught to *kothis* like me, we will definitely start a tiffin (snack) shop and take care of our lives. *−08*

Box 2. Preferences and Suggestions for Intervention Format

SESSIONS

In-person vs. telephone-based sessions

Face to face interaction with the counselor is a better method than mobile phone counseling because anything can be shared in the face to face interaction which is not possible in phone counseling. *−02*

Mobile phone will be easier when it comes to the time factor. It would help me avoid taking too much time from work because I could do it on my own schedule. So it would save me time but also money. *−14*

The advantage in mobile counseling is that it will be more private than face to face counseling, and even we can clear our state of mind. Instead of coming for the counseling it's better to have mobile counseling. *−27*

Well. If I have doubt during the face-to-face discussion, I can clarify it through mobile phone session. Also, if for some reason I cannot come, I can do a mobile phone session. *−37*

Individual vs. group-based sessions

I personally prefer individual counseling. Privacy should be maintained in individual counseling. I am very comfortable and will interact freely in individual counseling. I don't think group counseling will be useful to us. There are possibilities in difference of opinion between the group members. *−29*

Individuals who have been in sex work before and come out of it can come and address us. They will act as a role model for us who are involving in sex work. *−11*

Intervention counselor

NGOs (non-profit organizations) will be suitable for this [running intervention sessions]. The person conducting the program should be skilled and should have sound knowledge. They should also be able to reach the community. *−23*

If our peer male sex workers are called for the program there will be ego issues as we will not want to listen to them. They would start treating us as their subordinates and look down on us. *−08*

MOBILE PHONE MESSAGING

Concerns about confidentiality with mobile phone messaging

Some times when you send messages like "please use chocolate" [slang word for *condom*] there are possibilities for others to read to understand or might come to know about us. *−21*

Use of code words or secret phrase in mobile phone messages

If somebody at home sees the message then there will be problem. Different messages like poetry will be best. If you can use code words it might also be useful. *−31*

Difficulty reading mobile phone text messages

I am not really good in reading English or sending messages over the phone… Even if the SMS is sent in Tamil, there will be few who will know how to read Tamil properly. So I think SMS might not be useful. *−07*

Choice of mobile phone message format

Many don't know to read a SMS, not everyone is educated. Even Tamil some may don't know to read. If you are sending by voice message then I could use the mobile. *−30*

HIV TESTING

Men will have no problem testing. No one will refuse because they may need a test anyway and are not scared of testing.

Not all men, but probably a few may not test because they have just been tested somewhere else and won't want to test again. *−54*

Box 3. Foreseeable Challenges

Time constraints and scheduling conflicts

Having sessions over the phone are easy but we can't always speak openly as we may have family members around. We may not be able to talk and be forced to cut the call or we may have to switch off our phones. If I'm at my office, I won't be able to spare time to talk with you. The advantage of phones is that it will save time and money. *−28*

Social harm

All of us are interested in attending program but due to stigma we could not attend (family members might come to know about my status). If in case my family members come to know about my sex work, immediately I will be sent out of my house. And some of them will discriminate [against] me. *−17*

Importance of confidentiality and privacy

Sex workers will be happy to come if we know that no one else will find out about us being in the program. We need privacy and do not want what we talk about to be shared with anyone else. This is crucial. *−05*

Table 1

Descriptive characteristics of qualitative interview participants (N = 40)

	Mean (SD)
Age	31.9 (8.5)
Number of unprotected anal sex acts with male clients, past 1 month	7.5 (6.1)
Years doing sex work	9.0 (10.1)
Typical monthly income from sex work (Rs)[a]	2740.0 (2771.4)
	N (%)
Sexual identity	
Kothi	32 (80.0)
Double-decker	7 (17.5)
Gay	1 (2.5)
Relationship status	
Married to a woman	2 (5.0)
Female partner/girlfriend	1 (2.5)
Male partner/boyfriend	16 (40.0)
None	21 (52.5)
Sexual partners	
Men only	38 (95.0)
Women only	0 (0.0)
Both men and women	2 (5.0)
Education completed	
Secondary or Less	23 (57.5)
High Secondary	10 (25.0)
College or more	7 (17.5)
HIV status	
Positive	0 (0.0)
Negative	33 (82.5)
Unknown	7 (17.5)
Is sex work only source of personal income	
Yes	14 (35.0)
No	26 (65.0)

[a] Rs = Rupees (59 Rupees is equal to approximately $1 USD)

Table 2

Intervention session-by-session content overview and mobile message examples

Session	Format	Content	
Session 1 Introductions, Communication and Negotiation	**In-Person**	**A.**	Overview
		B.	Getting to know you
		C.	Sexual Health
			• What is sexual health?
			• Identifying and setting personal sexual health goals (exercise)
		D.	Chocolate [word for *condom* used by MSW in Chennai] and lubricant
			• Problems and Problem-Solving
		E.	Safer Sex- *A Menu of Options*
		F.	Communicating with Clients and Other Sex Partners
			• Why is communication important?
			• Challenges to communication (exercise)
		G.	Negotiating Safe Sex
			• Brainstorming and discussing strategies- framing, proposing alternatives (exercise)
			• Choosing a strategy that's right for you
		H.	Developing an Action Plan (exercise)
			• Identify problem, set goal, generate alternative solutions, evaluate solutions, develop plan for solution implementation
		I.	Mobile phone messaging
			• Message selection
			• Personalizing messages
			• Practice confidentiality role play
Session 2 Action Plan Check-in and Practice	**Mobile Phone**	**A.**	Reflecting on Action Plan Implementation
		B.	Successes and Challenges
		C.	Revising Action Plan [*if applicable*]
		D.	Practicing Skills Through Role Play
			• Discussion skills role play
			• Negotiation skills role play
Session 3 Sexual Triggers, Psychoeducation, and Wrap-Up	**In-Person**	**A.**	What is a Sexual Trigger?
		B.	Brainstorming Different Types of Sexual Triggers
		C.	Environment as a Sexual Trigger
			• "Comfortable" vs. "Uncomfortable" environments (exercise)
			• Trigger management- strategies to manage trigger and reduce sexual risk
			• Choosing a strategy that's right for you
		D.	Alcohol as a Sexual Trigger
			• Advantages and disadvantages of drinking alcohol
			• Strategies to manage trigger and reduce sexual risk (exercise)
			• Choosing a strategy that's right for you

Session	Format	Content	
		E.	Psychological Distress and Stigma as a Sexual Trigger • Who, What, and How of Stigma (exercise) • Psychological distress and sexual health • Strategies to manage trigger and reduce sexual risk • Relaxation and guided imagery coping tool (exercise)
		F.	Developing an Action Plan (exercise) • Identify problem, set goal, brainstorm choices, evaluate choices, act on best choice
		G.	HIV, STI and TB Psychoeducation (brief review/exercise)
		H.	Thinking Through *Dhanda* [word for *sex work* used by MSW in Chennai] • Why do *Dhanda?* (exercise) • How does *Dhanda* make you feel? • Transitioning out of *Dhanda—a personal decision*
		I.	Message check-in and next steps
Session 4 Action Plan Check-in and Practice	**Mobile Phone**	**A.**	Reflecting on Action Plan Implementation
		B.	Successes and Challenges
		C.	Revising Action Plan [*if applicable*]
		D.	Practicing Skills Through Role Play • Environment and client relationship role play • Alcohol role play • Stigma and self-esteem role play
Mobile phone message examples		•	Remember to use chocolates [word for *condom* used by MSW in Chennai].
		•	Stick with it!
		•	Believe in yourself and your power to stay safe!
		•	You deserve to be healthy, you deserve to be happy.