


Combination HIV Prevention Strategy Implementation in El Salvador: Perceived Barriers and Adaptations Reported by Outreach Peer Educators and Supervisors

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Abstract

El Salvador was one of three countries to receive funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria to conduct a combination HIV prevention intervention among transwomen (TW), men who have sex with men (MSM), and commercial sex workers (CSW). Program evaluation revealed that prevention activities reached only 50% of the target population. The purpose of this study is to examine the barriers that Salvadoran educators faced in implementing the peer education as designed and adaptations made as a result. Between March and June 2015, 18 in-depth interviews with educators were conducted. Violence was reported as the biggest barrier to intervention implementation. Other barriers differed by subpopulation. The level of violence and discrimination calls into question the feasibility and appropriateness of peer-led interventions in the Salvadoran context and demonstrates the importance of implementation research when translating HIV prevention interventions developed in high-income countries to low- and middle-income countries.

Keywords

HIV/AIDS; infection, prevention; illness and disease, community-based programs; community and public health, education, health promotion; health, marginalized or vulnerable populations, sexuality, sexual health

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Introduction

In March 2014, El Salvador began implementing a national combination prevention intervention for HIV, funded by the Global Fund to Fight AIDS, Tuberculosis and Malaria. Approximately 50% of the Global Fund budget (\$10.4 million USD) was dedicated for nongovernmental organizations (NGOs) to implement peer HIV prevention outreach among vulnerable populations. The other half was delineated for distribution of standard antiretroviral therapy and other services for patients living with HIV. Prior to the combination prevention program, most HIV funding in El Salvador had been dedicated to treatment and not prevention. In addition, most prevention efforts were directed to the general population, rather than to specific subpopulations, in spite of El Salvador's concentrated epidemic. Although the overall HIV rate is low at 0.8%, it is much higher among men who have sex with men (MSM) with a prevalence estimated at 10.5%, commercial sex workers (CSW) with a prevalence of 3.1%, and transgender women (TW) with a prevalence of 19% (Andrinopoulos et al., 2015).

The intervention followed a peer-educator model. Interventions using peer educators have generally been found to be effective in reducing sexual and injection-related risk for HIV infection (Latkin, Donnell, & Metzger, 2009; Latkin, Hua, & Davey, 2004; Latkin, Knowlton, & Sherman, 2003; Sherman et al., 2009; Traore et al., 2015; Weeks, Li, & Dickson-Gomez, 2009). Because of this, peer-led interventions are now considered evidence-based and have been translated to many parts of the world (Sherman et al., 2009; Stromdahl, Hickson, Pharris, Sabido, & Thorson, 2015). However, implementation of such interventions, particularly if done at a national scale or in different sociopolitical contexts, has received less research attention. Implementation outcomes include such things as the acceptability and

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perceived appropriateness of an intervention in a particular context, the feasibility of implementing it as designed, and its penetration to the target population; they become particularly important to understand when the goal is to change population-level outcomes (Proctor et al., 2011).

This study examined El Salvador's national combination HIV prevention plan midway in its second year through the perspective of its peer educators. Although peer prevention interventions like the one utilized in El Salvador have been successfully implemented previously, for example in the United States, it has underperformed in El Salvador. Thus, it is essential to assess why certain aspects of the outreach intervention did or did not work in El Salvador at this time and how this information may translate more generally to other low- and middle-income countries, especially those experiencing high levels of violence. As implementation outcomes include parameters such as the perceived appropriateness of an intervention and the feasibility of implementing it as designed, qualitative research can be an insightful tool to help evaluate and improve the implementation of peer-led HIV prevention interventions, especially those that have been translated to different sociopolitical contexts. This study specifically examines barriers that Salvadoran educators faced in implementing the peer education as designed, how these differed among the subpopulations (TW, MSM, CSW), and adaptations educators made as a result. Case studies such as the one presented here can contribute to implementation science by revealing the fit and validity of theories underlying both the implementation process and the intervention itself (Damschroder & Hagedorn, 2011).

Background

El Salvador's combination prevention intervention used peer educators to (a) engage vulnerable populations in the streets to discuss HIV prevention (i.e., condom use and the importance of regular screening for sexually transmitted infections [STIs] and HIV), (b) issue alternative government identification cards (Código Único de Identificación; CUIs) which could be used to seek HIV treatment from Salvadoran Ministry of Health clinics, and (c) provide vouchers for complementary support (such as psychological treatment and sexually transmitted disease testing) which could be used in primary care Clínicas de Vigilancia y Control de VIH/SIDA e Infecciones de Transmisión Sexual (VICITS clinics) and elsewhere. Issuance of CUI cards removed a significant barrier to receiving care, particularly among TW, as other government identification cards used the gender and names that were assigned to them at birth. VICITS clinics were formed in 2011 specifically to serve the health needs of MSM, TW, and CSW, especially in the prevention, diagnosis, and treatment of HIV and STIs. They are embedded in El Salvador's existing national health care structure. The targeted HIV prevention outreach was coordinated through 14 community HIV centers (Centros Comunitarios de Prevención Integral;

CCPIs) that employed a full-time coordinator and outreach educator. These trained educators, peers drawn from target populations, were responsible for delivering prevention materials, messages, HIV testing coupons, and complementary support packages to vulnerable populations in the streets.

Preliminary evaluation of the outreach component of El Salvador's national prevention intervention indicates that implementation underperformed in terms of the number of participants reached. The Global Fund's goal was to obtain >75% coverage of its combination prevention intervention among at-risk groups by December 2016. However, data from November 2015 show that during Period 3 (January 1, 2015–June 30, 2015), only 20% of El Salvador's MSM population had been reached with HIV prevention programs versus the 40% projected goal (The Global Fund, 2016). Similarly, 22% of CSW and 10% of TW had contact with the combination HIV prevention intervention versus 39% and 38% projected, respectively. During Period 1, the performance rating given was "unacceptable," and during Period 3, it was described as "inadequate but potential demonstrated" (The Global Fund, 2016).

This less than ideal performance might stem from the fact that this peer-led combination HIV prevention intervention, like most evidence-based interventions, was developed and deemed effective in very different contexts than those in which it was being implemented. Studies conducted in developing countries have often neglected to consider how interventions are affected by the community and sociopolitical contexts, for example, laws prohibiting same sex behaviors or contexts of extreme violence (Brown et al., 2015). El Salvador is one of the most violent countries in the world: From January to August 2015, there were 4,246 homicides, an average of 17.5 a day, up 67% from the same 8-month period in 2014 ("El Salvador Gang Violence," 2015). Interviews with peer educators reported in this article reveal the challenges associated with implementing peer HIV prevention interventions developed and tested in affluent countries into a developing country with extreme levels of violence.

Method

The data reported in this article were part of a larger case study to explore implementation of the combination HIV prevention intervention. All groups involved in administering or implementing the national strategy were interviewed including members of the country coordinating mechanism (CCM; $n = 20$), personnel at VICITS clinics, HIV clinics, outreach educators and supervisors of HIV community centers, and members of the affected populations who were reached and not reached by the intervention. The research was guided by implementation science and systems theory perspectives. For example, from implementation science, we explored organizational readiness, decision-making processes, and barriers and facilitators to implementation. From

systems theory, we explored coordination among different groups and potential positive and negative feedback loops in achieving project objectives.

Between March and June 2015, a Salvadoran research assistant completed semistructured interviews in Spanish with 18 HIV educators at community centers serving TW, CSW, and MSM. We selectively sampled from the 14 HIV community centers (CCPIs) to include six CCPIs that were located in different parts of the country (i.e., the central part where the capital is located vs. the more remote western regions), rural versus urban populations served, and to represent each of the target populations. We interviewed both educators and supervisors at each CCPI. We used targeted sampling to increase representativeness, and theoretical saturation was reached. Semistructured interviews were used to systematically ask about factors found to be important in implementation of interventions while still allowing for exploration of unexpected findings. Interviews covered their experiences conducting outreach with target populations, barriers experienced, and adaptations they made to implement the intervention. Interviews also investigated characteristics of both the educator and target populations. Questions were both objective (e.g., “What type of training did you receive before starting this job?”) and subjective (e.g., “What was the greatest difficulty you faced while doing prevention work?”). All interviews were conducted in a private room, tape-recorded, and transcribed verbatim by native Spanish speakers. Interview time ranged from 30 to 80 minutes. All participants were informed about the study purposes and gave their formal, written informed consent prior to participation. They were informed that their decision to participate or not in the interview would not be shared with their employers or affect their employment in any way. Because of the sensitivity of some of the questions, they were instructed they could skip any question(s) and/or stop the interview at any time for any reason. In addition, the interviewer debriefed with participants after the interview to ascertain whether participants were emotionally upset and needed further assistance. Participants did not receive any monetary incentive for participating in the interview. No potential participants refused to participate. This research was approved by the institutional review boards at the Medical College of Wisconsin and the Universidad Centroamericana José Simeón Cañas.

Interview transcripts were analyzed using MAXQDA Qualitative Data Analysis Software to explore the techniques outreach educators used in the field, perceived barriers to implementing the intervention, and characteristics of the target and educator populations. Coding proceeded using an iterative, constant comparison process. Initial codes were developed inductively by the principal investigator (J.D.-G.), a medical student (M.B.), and the Salvadoran research team by carefully reading interview transcripts and deductively based on factors found to be important in implementation of peer-educator interventions in the literature (Proctor et al.,

2009; Proctor et al., 2011). To support scientific rigor, after the codebook was finalized, the research team collaboratively coded interviews, resolving differences of opinion collectively. Interview excerpts related to themes were then exported, and participant responses were systematically compared, paying particular attention to code overlaps, for example, violence and discrimination. We compared responses among peer educators, supervisors, and for peer educators of different populations in a constant comparison approach to determine how identity and context influenced peer educators’ perceptions of their work. Final interpretations were checked with the research team until all were satisfied with the explanatory model presented in this article. Selected study participants’ personal quotes were chosen to represent the major themes and translated into English solely for the purposes of disseminating this body of research. Translation to English was conducted by the first author, a native English speaker. Translations were subsequently compared with the original Spanish by the study’s principal investigator to ensure accuracy.

Results

Characteristics of the Educators

HIV prevention educator work was a new position at most of the HIV community health centers (CCPIs). Sixty-six percent of the participants were hired specifically to implement the combination prevention intervention; of these, 66% had no previous experience working with their target population or with people living with HIV. Before being trained to implement the combination prevention strategy, many educators considered themselves as “clients” or benefactors of HIV prevention programs as expressed by this TW peer educator: “No, I’ve never worked. Always before in a project I had been a ‘client.’”

Many educators noted that simply being a member of their target population was beneficial for their clients:

Just the fact that a person isn’t from their population creates a small barrier which can impede . . . the desire to make some real changes in their health. (Educator serving CSW)

However, educators also emphasized the importance of the skills they learned in their training as educators using motivational interviewing.

A change of behavior, . . . it’s not going to be generated by the educator, but throughout the tools that the educator brings. (Educator serving TW)

As will be demonstrated later, most of educators met their clients on the street or venues such as parks, bars, and sex work establishments. Although as peers, educators were familiar with some of these venues, the situation of violence, nature of sex work, and stigma related to sexual and

gender diversity sometimes made accessing clients and venues difficult.

Adaptations and Perceived Barriers

Barriers to outreach reported by educators varied in frequency by target population and include violence, difficulty accessing members of the target population, client resistance, problems integrating services, and insufficient program resources. Gang violence was the most frequently mentioned barrier among all educators and resulted in many of the difficulties accessing populations reported by educators. However, client resistance to being identified as members of the target population was also considered a significant barrier and was a result of the extreme levels of stigma and discrimination faced by these populations. For this article, we define stigma using Goffman's (1963) classic definition whereby an individual with an attribute is discredited by society because of that attribute. Adaptations described are those that individual peer educators started to practice after the intervention began to continue their work. However, as will be seen, educators were not able to make all the adaptations they desired due to lack of resources. A complete list of barriers, their frequency as reported by educators serving different target populations, and the adaptations educators made in response to these are summarized in Table 1.

Table 1 represents perceived barriers and adaptations reported by peer educators broken down by subpopulation (MSM, TW, CSW). Incidence was enumerated based on coding of interviews.

Violence. As violence escalated in 2015, educators found outreach more difficult to implement. Two TW, an educator and a client with whom she was doing outreach work, were brutally murdered on the street during the time frame the researchers were collecting data ("Las muertes invisibles," 2016). Most of the educators stated that violence was their biggest barrier in implementing, greater than disinterest by the target population:

I believe that the difficulty is not because of the population, rather that the difficulty in this moment is crime, the sectioning of different gang territories, the gangs downtown . . . That has really become a difficulty because we know that we can't move from one area to another without being afraid of the risk. (Educator serving CSW)

Educators felt in danger on two levels: (a) the ubiquitous nature of gang violence which affects the general population in El Salvador at the current time, and (b) as members of vulnerable populations (TW, CSW, or MSM) that are often victimized. Reasons for violent victimization of peer educators or target populations are difficult to entangle because they often live and work in areas with high rates of violence that is directed toward everyone. It is also clear, however, that gangs victimize MSM, TW, and CSW:

Parks, public plazas, they are open spaces, spaces surrounded by places already claimed by criminal groups that have control . . . there is drug trafficking, armed intoxicated people . . . from the moment that the educators are on the corner they are already at risk, surrounded by homophobia and hate that exists for those people. (Educator serving MSM)

This extreme level of violence affected the topics that educators felt comfortable broaching with the target population. Many educators serving CSW commented that domestic violence could often not be discussed.

As I told you . . . it's because the majority [of CSW] are or are related to people who belong to the gangs. [Interpersonal violence] is a delicate topic because it can create violence for them or for us. (Educator serving CSW)

In the example above, because gang members often act as pimps or the primary sex partners of CSW, addressing domestic violence can cause repercussions for breaking the code of silence surrounding gang members' business.

One adaptation that educators made to work in these dangerous contexts was never to carry their DUI (Documento Único de Identidad; government ID) with them during outreach. DUIs contain their real names and addresses, which might be in a rival neighborhood, potentially making their home and family members targets of violence. Family members are often threatened to extort money from targets. It was also difficult for outreach educators to find safe spaces to retreat to during outreach as gangs in Central America have also made a business of extorting small business owners and bus drivers. (Bus lines are privately owned.) In addition, outreach educators reported feeling that gang members were acting as lookouts and following them as they performed their work:

The business owners can't do anything [when outreach workers are threatened or victimized by violence] because they are also under their [gang member's] control. You see here is a very complex situation—they are controlled, so one sees all of that, the buses are also controlled . . . At times I . . . have visited businesses and there is this person; then I go on the bus and there is that person . . . giving the feeling of persecution. (Educator serving CSW)

In addition, educators are continually pressed to recruit new participants, increasing the distance they must travel from the CCPIs. Travel to unfamiliar locations and inadequate money for safe transportation also increased the danger level for the educators. Many educators, as the participant describes below, elected to take taxis rather than buses as buses are often robbed by gang members.

Sometimes [the gang members . . .] are those who are directly controlling who enters and exits the businesses. . . . They only give me five dollars for a job at night in order to transport me from the CCPI to the business and from this business to lodging because we have been prohibited to stay in the CCPI. What's

Table 1. Perceived Barriers and Adaptations by Subpopulation Reported by Peer Educators.

Barriers	Subthemes	Incidence Among Educators Working With			Adaptations
		CSW	TW	MSM	
Violence, discrimination	Educator feels, is being threatened	9	6	7	Never bring DUI (government ID) Offer accompaniment, diversity training for workers
	Discrimination in health clinics	5	8	6	
Difficulty accessing target population	Level of gang violence high now	15	9	14	Work during day, avoid areas Do not return for 3 weeks, taxis Map out zones, gain confidence Befriend leaders, present to owners Ability to identify characteristics easier if from target population Try to have come to CCPI (HIV community health center)
	Areas too violent to visit	5	3	10	
	Unfamiliar, far away areas, public transport	6	9	11	
	Business owners issues (refused entry, selling condoms)	11	1	1	
	Target population does not associate with/as target population	4	0	12	
Resistance to patient education	Loud background noise and distraction	8	2	0	Ensure data are confidential Is friendly, returns later
	Fear of loss of anonymity	1	1	12	
Problems maintaining appointments or integrating services	Already knows information, does not want, no time	4	9	5	Diminish idea of “asistencialismo” See client when convenient for them Education regarding HIV prognosis, treatment Find a different location for the meeting/appointment Revisit area in street where last seen
	People motivated by incentives	6	7	4	
	Cannot afford to leave work, issues with hours of operation	4	2	6	
	Fear of testing HIV+	6	6	8	
Program challenges	Cannot cross into another gang territory or associate with gang members	3	2	3	Use what incentives they have Training and confidence Offer workshops Rely on better relationships with other organizations
	Patients have mobile/telephone issues	2	2	7	
	Economic (resources, personnel)	10	2	3	
	Methodology long, complicated	4	2	3	
	Cannot reach more populations, complementary services lacking	3	3	2	
	Lack of coordination with HIV clinics	3	1	0	

Note. CSW = commercial sex workers; TW = transwomen; MSM = men who have sex with men; CCPI = Centros Comunitarios de Prevención Integral; DUI = Documento Único de Identidad.

more, this comes from my salary . . . So, these [gang members], they see all of that—and we risk that they will assault us, fight us, that they will kill us if it is possible for going to areas in which we aren't familiar, don't know what we are doing . . . So that is a huge risk that . . . the Global Fund shouldn't put us in. (Educator serving CSW)

Many educators performed their outreach at night when they were more likely to find their target populations working. However, travel at night is even more dangerous. Thus, many educators preferred to spend the night close to where they did outreach rather than travel home. Many educators suggested that providing the CCPIs with vehicles and security personnel would facilitate their work under these circumstances. However, like the participant above, they recognized that the Global Fund had not budgeted for that expense.

Although many educators continued to risk their lives to conduct outreach, at times educators had to suspend working

in particular neighborhoods due to the extreme levels of violence.

We are responsible for here in San Salvador. We try to go as little as possible to the Central Market, the Hula Hula Plaza, the Barrio Plaza; we are going to try for a little while at least until they drop their “guards” in these places and focus on the departments (other states) because they have assigned us to parts of San Salvador that we haven't gone.

Interviewer: So, you're going to leave that zone?

For a while, because really it's very dangerous. (Educator serving MSM)

Gang violence not only affected educators' ability to visit members of their key populations but also prevented members of key populations from visiting CCPIs or VICITS

clinics to receive prevention education or take HIV tests because of the dangers of traveling from one area to another.

There are women who can't come because they are from the opposite side or to . . . the VICITS clinic, many don't come because they are from one gang's territory and can't pass through the territory of another gang. (Educator serving CSW)

Although violent crime has long been a problem in El Salvador and previously identified as a possible barrier for HIV prevention interventions, the current levels of violence have surpassed even some of the most violent years and came as a surprise to the funders and recipients that implemented the national HIV prevention strategy (Dickson-Gomez, Corbett, Rodriguez, & Guevara, 2010). Although some adaptations could have been made with more resources, for example, vehicles for transportation, the level of violence likely would have remained a problem for any health project.

Discrimination. Although less prominent than violence, a frequent barrier faced by educators was resistance among the target population to the intervention. At times, participants expressed disinterest or lack of time. Often though, because of previous discriminatory treatment by health care professionals bordering on structural violence, they were afraid of further discriminatory experiences during the intervention.

[Gays] have experiences [that are] so negative in different aspects, that at the time you approach them, they make themselves very difficult. They [medical/service providers] have lost credibility, for example in institutions like the Ministry of Health, because of the bad treatment they have received. They have had problems at a legal level . . . with police . . . They, because of this, become vulnerable and resistant to take part in [the project], more so when we arrive, saying that we offer them a complementary packet of benefits. Some don't believe, they don't believe because of bad experiences. (Educator serving MSM)

Unfortunately, some participants experienced stigmatization during the project at VICITS clinics where they were tested for HIV and STIs, particularly at the beginning of the project. However, the reputation of the clinics improved over time with increased intervention to reduce stigmatizing attitudes among health care providers.

At the start, when the VICITS clinic was started, um, how do I say this? It was tiring because they didn't have . . . information about sexual diversity. . . . Now, today they [clients] have a little less fear about going to the VICITS clinics. (Educator serving TW)

All the populations served by the national combination HIV prevention strategy faced stigma from health care providers or the general public. Engaging in commercial sex work, for example, violates Salvadoran notions of being a

good woman and mother, particularly as commercial sex work is often accompanied by substance use as a condition of employment, as will be seen below. CSW are also frequent victims of gang violence (Dickson-Gomez, Bodnar, Guervara, Rodriguez, & Gaborit, 2006a, 2006b). However, TW have faced more stigma than CSW and MSM and were often victims of extreme violence. Some TW expressed fatalism with respect to the violence as expressed by one peer educator: "They have already assaulted me many times and sometimes I come here all discouraged, but in the end these are things that have to happen." According to a study completed by the Organization of American States, in Central America, where life expectancy overall is greater than 70 years, TW can expect to live between 30 and 35 years ("Las muertes invisibles," 2016).

Educators for MSM and TW felt that the levels of stigma, often expressed through violent acts, caused MSM and TW to suffer from poor self-esteem and trauma and that many used alcohol and drugs to deal with their experiences. However, just as there were few social spaces where TW are accepted, educators noted that transgender-sensitive drug or alcohol treatment was lacking. They called for the integration of drug treatment resources into CCPIs for TW.

If there was a place like AA [Alcoholics Anonymous] in our CCPI, it would be much easier for the clients to be able to access. The places they could go to [now . . . People] can discriminate them and that is why the girls don't go to NA, AA. (Educator serving TW)

VICITS clinics were another potential place where mental health and substance abuse treatment could be provided to MSM and CSW, but these services were not available in the clinics. In addition, although VICITS clinics received training to be sensitive to sexual and gender diversity to provide sexual and general health services to TW and MSM, they did not provide gender transition services to TW. In fact, to our knowledge, no publicly funded clinics provide support to TW in gender transition in El Salvador, a situation which has caused many TW to try to transition on their own, causing serious health risks.

For example, an endocrinologist, in our case this is a very important part for the women and because they have not had information from an endocrinologist, many have died. Many have horrible problems with their breasts because they have injected themselves with oil. (Educator serving TW)

Educators report that openly gay men in El Salvador face daily discrimination, and many resort to hiding their identities and go to great lengths to preserve their anonymity, which makes them difficult to seek out and approach:

It is the fact that those who are not openly [gay] are the most difficult to approach because one can't go around asking "Look, are you gay?" It is not possible but we need to be flexible in order

to identify all of the signs and figure out how to approach them in a way that doesn't stigmatize the person. (Educator serving MSM)

Because many MSM hid their identities, they did not always frequent gay venues such as night clubs and bars. Instead, they often went to parks for anonymous sexual activity. Parks and other public places frequented by MSM are also places that are controlled by gang members, increasing the danger of working in these environments and the importance to potential clients of keeping their sexual identities hidden. In these situations, educators reported that clients felt uneasy being seen with an openly gay educator for fear of being identified as gay. In addition, they were often reluctant to participate in the project because the Global Fund reports required signatures from participants to ensure that target populations were receiving the services and materials (e.g., condoms) that were being distributed. However, many MSM worried that their sexual identity could thus be disclosed to family, friends, and other community members and did not want to provide their signature, names, or addresses. Educators adapted by meeting with clients in their homes and by reassuring them that creating and identifying them with a CUI (Código Único de Identificación; alternative government ID formed using a series of numbers) instead of their real names would protect their identities. However, many MSM still refused to provide phone numbers or addresses, making it difficult to follow up with clients with more interventions over time as an educator serving MSM expressed:

During the combined prevention we have to provide a follow-up and there are people that don't provide their telephone numbers, much less their Facebook, much less their addresses . . . so because we have to, so to speak, we are forced find them in a park.

Sex work establishments. Although there were challenges to work in all the different settings in which educators served, violence being primary, the locations where educators worked with CSW differed in that these were places of business, owned and controlled by employers who also controlled the CSW's time and movements. Many owners were suspicious of letting educators in, and many had to be approached and convinced that HIV prevention was good for their businesses.

Another goal we achieved is the opening that we have been able to achieve with the businesses from the educators last year. And from that work we have heard of other businesses and this has helped us not to have so many obstacles like we had last year. (Educator serving CSW)

However, other business owners prevented educators from coming, as they had made selling condoms part of their

business. Business owners often confiscated sex education materials and condoms to let educators enter, which they would later sell.

The business owners sometimes don't let us enter. . . . They are the ones who sell them inside . . . condoms from the Ministry of Health . . . and they sell them. (Educator serving CSW)

In addition, listening to an educator talk often took time away from clients, and educators were often interrupted while CSW went to visit clients.

The methodology is rather long, so often for a half hour we have to stop because a customer arrived and they have to serve the table. . . . They are sex workers and waitresses. . . . In the bars and other places our work is very complicated: interruptions from the noise from the jukebox, getting up to tend to a client . . . (Educator serving CSW)

Finally, educators' messages about consistent condom use were sometimes met with resistance within sex work establishments because as this educator serving CSW notes, "There are many clients that offer more money if a condom is not used."

Poverty. A barrier that was perhaps more pronounced for educators working with CSW was the extreme poverty in which most lived. As seen above, the need to work often limited the amount of time that they could listen to HIV prevention messages. This extreme poverty was in part caused by gender inequality and the lack of education that could provide women with more work opportunities. For example, in trying to get CSW's signatures to document them as participants in the combination prevention program, educators discovered that many women could not read or write. Because of this need, a literacy class was started weekly at one of the CCPIs. Teaching women to read and write was considered not only necessary for women's participation in the project, but basic literacy was also seen as a step in empowering women either to fight for their rights as sex workers or to seek other economic opportunities.

Educators for CSW were polarized regarding the use of incentives. Previous projects among this population relied heavily on their use, leading some educators to view this as "asistencialismo," which loosely means dependence on government or NGOs for assistance rather than being invested in actually improving health.

What we are trying to do is take away this idea of "asistencialismo" because they only see it as "ah, they will give us condoms" and we say to them that we have not come only to hand out condoms—it is tool that we can use to attract them—but our goal is to create human rights and empowerment as part of the strategy. . . . What we want is women who say "I am a sex worker; I need condoms and lubricant; there's none in the clinic so I'm going to buy them because I see that it is necessary, just

like the need to buy cigarettes, to buy a beer.” (Educator serving CSW)

However, some educators passionately believed that their population needed incentives—not only to motivate attendance but also because of the extreme levels of poverty and violence. As seen above, the need to make money was often an impediment to attending HIV prevention intervention events. In addition, CSW cannot afford to buy condoms and spend time with peer educators while trying to make enough money to pay off the gangs and support their families:

So . . . It’s not “asistencialismo”—you have to see the need that my population has in this moment because of the gangs—she doesn’t go [to HIV prevention interventions] because [gang members] can kill her— . . . she has to give [the gangs] 40-50 dollars weekly and she has 4 children. (Educator serving CSW)

In fact, there are some recent studies to suggest that using monetary incentives in low- and middle-income countries decreases CSW reliance on sex to meet basic necessities and decreases their STI incidence (Heise, Lutz, Ranganathan, & Watts, 2013).

Discussion

Global Health Initiative such as the Global Fund, the World Health Organization, and the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) have invested a great deal of money in nationally scaled combination prevention interventions using multiple evidence-based interventions such as the peer-led intervention used to engage populations at risk for becoming infected with HIV in El Salvador. Brown and colleagues (2015) suggested that systematic evaluation of the implementation process is needed to guide adaptation of interventions as a way to efficiently translate evidence-based interventions into different sociopolitical contexts to avoid misspent funds. In addition to assessing whether or not an intervention works, we must seek to understand why and when it works and under what circumstances (Brown et al., 2015). Peer educators’ experiences and the perceived barriers they encounter and adaptations they make relay a wealth of information regarding the success and limitations of an HIV prevention program. Peer educators are in a unique situation not only as primary contacts with the target population, conveyers of information, and facilitators of change but also as peers, they share many of the same characteristics and barriers their clients do. Their insights should be earnestly considered during the evaluation of the implementation of combination HIV prevention programs.

Although educators felt that they had been successful in changing some of their clients’ behaviors, the combination prevention intervention in El Salvador failed to reach its goals in terms of the number of individuals of the target population who received the intervention. Penetration or reach

of an intervention is an important implementation outcome (Proctor et al., 2011). Results of an evaluation from a previous but similar combination HIV prevention program for MSM used throughout Central America showed similarly low levels of penetration. Firestone and colleagues (2014) discovered that exposure to any program component was 32% ($n = 3,531$) but only 2.8% of MSM received all of the components. Exposure to the intervention was strongly associated with reductions in HIV risk: Men exposed to both behavioral and biomedical components were most likely to use condoms with water-based lubricant at last sex, and those exposed to behavioral interventions were more likely to have tested for HIV in the last year. Thus, understanding implementation barriers and proposing adaptations is essential to improve outcomes and significantly reduce HIV incidence. To improve intervention penetration by increasing the ability of educators to travel safely to members of the target population, educators could be provided with project-owned vehicles. Alternatively, more educators could be contracted without increasing costs by offering smaller stipends. This might allow peer educators to work only in their own communities, increasing the dose of intervention that members of the target population receive. The ultimate success of any prevention program depends on its reaching the people at a dose sufficient to promote behavioral change.

Our results indicate that fidelity, which is the factor most often considered in studies of dissemination of interventions, is less important than the feasibility, appropriateness, and acceptability of the intervention (Proctor et al., 2011). Educators for this combination HIV prevention intervention in El Salvador were drawn from target populations and had little prevention experience before being hired as peer educators. In spite of this, there was considerable uniformity in the methods they used to find and engage members of their target populations, suggesting a high degree of fidelity to the approach advocated by the funders of this combination prevention intervention. They made adaptations to increase their safety and effectiveness in conducting outreach but were limited by the current violent sociopolitical climate and the resources available to them. However, street outreach often was not feasible or safe due to the high levels of gang violence and violence targeted to the at-risk populations. Similarly, CSW’s work environments were often not considered appropriate or acceptable places to conduct outreach as it might interfere with business. Furthermore, many MSM did not find street outreach to be acceptable because they were not openly gay and did not want their identities exposed.

The extreme levels of violence in El Salvador at the current time hindered the implementation of this combination HIV prevention intervention. However, peer-educator models that rely on street outreach might not have been feasible in El Salvador: Even before the current spike in violence, El Salvador was one of the most violent countries in the Western hemisphere (Cruz, 1996, 2005). Certainly, violence played a large part in the difficulties educators had in reaching

members of their population and in their populations reaching other services that were part of the national prevention strategy and could have been the major reason the Global Fund implementation goals were not met.

Some of the violence educators experienced took the form of structural violence, which is often directed most evidently against at-risk populations. This combination HIV prevention plan has tried to address structural violence among at-risk populations, at least in the medical establishment, by educating health care providers about sexual and gender diversity. This was demonstrated through treating MSM and CSW with respect and using TW preferred names when addressing them. However, much remains to be done in medical establishments which still do not provide services for the psychosocial needs of CSW, MSM, and TW or for gender transition services for TW. Attitudes among the general public are even more stigmatizing. Sexual and gender minorities are still seen as “abnormal,” and thus are subject to a great deal of discrimination and even violence, which are seen in some of the difficulties reported by educators above. TW, in particular, are seen as deviant and are victims of extreme violence (“Las muertes invisibles,” 2016). CSW contradict Latina gender norms of sexual passivity and no substance use. Their extreme poverty and lack of access to education is also a symptom of gender inequality in El Salvador. The need for secrecy and the mistrust given to health educators (especially among MSM) is a result of the structural violence they receive (stigmatization) and the extreme poverty they face (especially for CSW). Although violence is detrimental for the entire Salvadoran population, the stigmatized populations targeted by the national strategy are particular targets. That includes both for the peer educators and their clients.

It is unclear how able or willing educators would be to continue the intervention in its current form. Results thus call into question the appropriateness of community outreach methods developed in the United States to low- and middle-income countries with extreme levels of violence. The educators and TW, CSW, and MSM clients continue to expose themselves to high levels of danger by working in public spaces and would perhaps benefit by delivering HIV prevention via social networking or individual interventions in private spaces. Further research is required to understand under what circumstances and how these interventions function as designed or can be appropriately adapted to the given sociopolitical situation. Investigations that build on this body of work will help to address possible adaptations for combination HIV prevention interventions among the different subpopulations (MSM, TW, CSW) in El Salvador and other low- and middle-income countries experiencing high levels of violence.

Limitations

Like all qualitative studies, the relatively small sample size of participants might not be representative of all educators,

particularly those working in areas that were not sampled. However, we used targeted sampling to increase representativeness, and theoretical saturation was reached. In addition, more than 60 people involved in other aspects of the combination prevention intervention were interviewed, including members of the Plan International, the principal receptor of the Global Fund monies, and the CCM, the governing body of the national combination prevention plan made up members of target populations, NGOs, the Ministry of Health, and Plan International. They also reported that violence was the largest barrier to achieving the combination intervention strategy’s goals.

Conclusion

Hampered by increasing levels of violence, the national combination HIV prevention intervention program has underperformed in El Salvador. Our study investigated barriers that Salvadoran educators faced in implementing the peer education as designed, how these differed among the subpopulations (TW, MSM, CSW), and adaptations educators made as a result. Findings suggest the intervention could have been further tailored to address the high levels of violence in El Salvador and to meet specific target population characteristics and needs. Although individual peer educators delivering prevention messages on the streets were able to make adaptations to outreach techniques, it is not clear how willing or able they would be to continue their work, or how effective interventions would be given the current level of violence. Results of this case study demonstrate further research is needed to understand under what circumstances and how these interventions function as designed or can be appropriately adapted to the given sociopolitical situation.

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