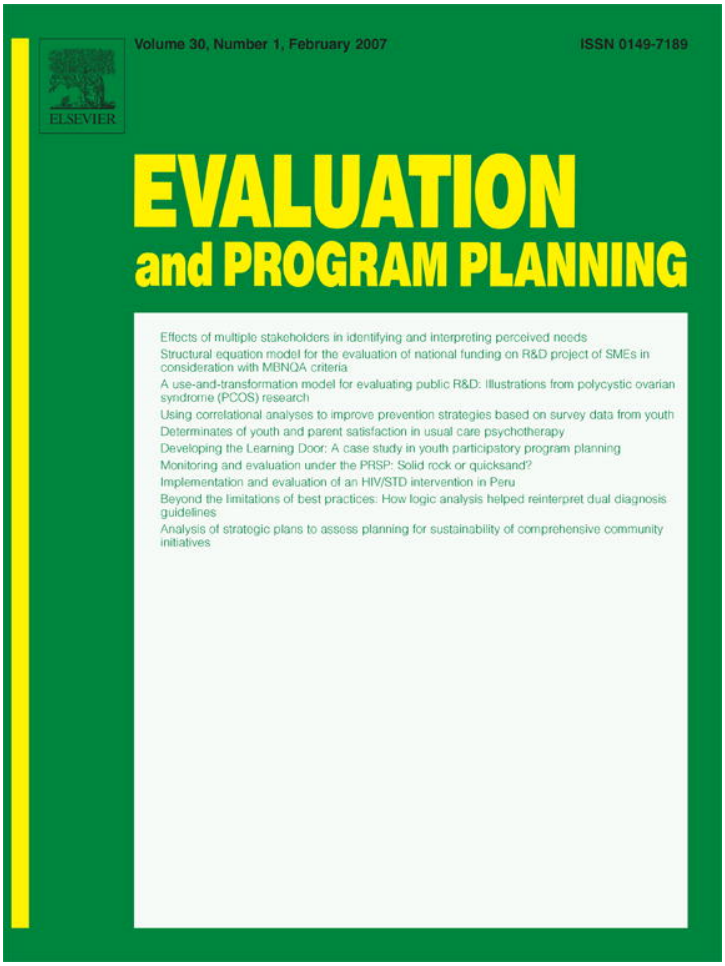

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Implementation and evaluation of an HIV/STD intervention in Peru

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Abstract

This paper presents the lessons learned through a process evaluation (PE) after 1 year of implementation of a 2-year community intervention in Lima, Peru. The intervention consisted of training and motivating community popular opinion leaders (CPOLs) for three marginal population segments to disseminate prevention messages among their peers. PE data included: observations, qualitative interviews with CPOLS, conversations and messages delivered by CPOLs, training facilitators' perceptions about implementation, and a survey of CPOLs. The PE helped to document and enhance the intervention. CPOLs were motivated to talk to their peers. CPOLs perceived that their participation had an effect on their own risk behaviors and saw their role as beneficial to their community. The PE was helpful in examining training delivery and the feasibility and acceptability of the intervention in order to assess the elements related to program success necessary to replicate the CPOL model.

Keywords: Process evaluation; Implementation; HIV/STD intervention; Peru

1. Introduction

While the emergence of effective therapies for HIV has brought a new era in the global response to AIDS, preventing new infections will continue to represent the most important approach to HIV in the developing world, where access to treatment is still limited, and where up to 95% of all new worldwide infections occur (UNAIDS, 2004). Different programs have been implemented in Latin America to promote safer sexual practices, but very little research has been conducted on developing, implementing and evaluating HIV prevention interventions.

Community-level interventions, in contrast with individual interventions, focus on affecting the entire community in order to promote change in norms and risk (Kelly, 2005). The US National Institute of Mental Health (NIMH) Collaborative HIV/STD Prevention Trial is a multi-site randomized study of a community-level prevention intervention in five countries: China, India, Russia, Zimbabwe, and Peru. The intervention focuses on mobilizing and training community popular opinion leaders (CPOLs) to promote change in sexual risk behavior and norms throughout a community. The goal of this trial is to identify an evidence-based intervention to help prevent HIV and STDs among high-risk populations in resource-poor countries. The University of California, Los Angeles (UCLA), the University of California, San Francisco (UCSF), and Universidad Peruana Cayetano Heredia (UPCH) are collaborating to test this intervention among three population segments in lower-income neighborhoods, men who self-identify as homosexual, women with multiple male partners, and heterosexually identified men. The study is being conducted in Lima, Trujillo and Chiclayo, three coastal cities in Peru.

In this paper, we use process-evaluation methods to examine trainings, conversations and messages delivered by CPOLs, acceptability of the intervention among CPOLs,

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and PE acceptability among staff and CPOLs after the first of 2 years of intervention implementation of the NIMH study in Lima. The aims of the PE are:

(a) To enhance the quality of the intervention during implementation by providing feedback and contributing to problem-solving and the continuous improvement of the intervention (Donaldson & Gooler, 2003).
(b) To assess fidelity to the internal validity and integrity of the intervention by examining the adherence of the implementation to the intervention core elements (McClintock, 1986).
(c) To examine the feasibility and acceptability of the intervention by the CPOLs who promote change in risk behavior and community norms.
(d) To better interpret the study outcomes by documenting the intervention and examining stakeholders' perceptions and the contextual influences affecting the intervention (Bradley, Wiles, Kinmonth, Mant, & Gantley, 1999; McKenzie & Smeltzer, 1997; McGraw et al., 1994).
(e) To examine the functioning of the intervention (Weiss, 1997) independently from the changes in HIV/STD incidence and risk behavior measured as study outcomes.

2. Background

2.1. NIMH community level intervention trial

This study aims to test Jeff Kelly's and colleagues' "Popular Opinion Leader" model (Kelly et al., 1991) in different countries, adapting and tailoring the intervention to cultural contexts and with populations different from which the model was originally designed for in the USA. The CPOL model includes the four elements of diffusion of innovation theory: an innovation, communicated through certain channels, over time, to members of a social group (Rogers, 1995). In addition, Kelly and colleagues have identified a series of core elements key to maintaining the effectiveness of the model (Kelly, 2004). These core elements include: (1) an identifiable target population; (2) identification of popular opinion leaders (CPOLs) within that target population; (3) training of those CPOLs over a minimum of four sessions; (4) 15% of the target population trained as CPOLs; (5) training of CPOLs to disseminate prevention messages in everyday conversations; (6) training of CPOLs that incorporates effective theory-based behavior change messages and role-play practice exercises; (7) goal-setting with CPOLs to engage in prevention conversations following the training; (8) CPOLs' conversations are discussed at subsequent reunions; and (9) logos, symbols, etc. provide cues to stimulate conversations between CPOLs and others. For a discussion about the significance and use of interventions for HIV prevention based on diffusion of innovation theory and CPOLs see Kelly (2004) and Bertrand (2004).

The 2-year study intervention consists of identifying, recruiting, training, and motivating individuals who are influential or respected (CPOLs) within their social groups or networks to disseminate HIV and STD prevention messages through every-day conversations with their peers, friends, or acquaintances in social venues and other places in the neighborhoods (*barrios*). The intervention relies on the CPOLs as diffusion agents to promote change in risk behavior and norms within the community. The outcomes of the intervention are changes in STD and HIV incidence and self-reported sexual risk behaviors measured at baseline and two yearly follow-up assessments in a cohort of approximately 3200 participants (for the three cities at the Peru site) belonging to the study target populations in both control and intervention venues.

2.2. Study population in Peru

Based on data from previous studies (Altamirano, Copestake, Figueroa, & Wright, 2003; Cáceres & Rosasco, 1999; Cáceres, Marin, Hudes, Reingold, & Rosasco, 1997; Tabet et al., 2002) and our own epidemiological and formative ethnographic research (Konda et al., 2005; Salazar et al., 2005; Salazar et al., 2006), this trial targets men and women belonging to three poor and marginalized population segments at greatest risk for HIV and STDs.[1] These segments are:

(a) *Heterosexually identified men*. Most of these men are single and do not work or study. They regularly socialize with their friends at street corners, in the context of drinking alcohol, talking about women, and planning activities related to the defense of the street as their territory. These men often engage in petty theft, gang activity, drug use (marijuana, cocaine paste, cocaine, and inhalants) or dealing, and transactional sex with homosexual men. They are at risk for acquiring and transmitting HIV/STDs through unprotected sex either with their girlfriends, women with multiple partners, and through sex with homosexual men. Heterosexually identified men were the largest of the three segments recruited.
(b) *Men who self-identify as homosexual*. Most of these men are employed; some own or work in small hair salons. Some are involved in sex work outside the

[1] In Peru, HIV is an urban epidemic with increasing trends among the young, poor and other vulnerable populations. The estimated number of people living with HIV in 2003 was 82,000 UNAIDS (2004). As of February, 2005, 16, 610 AIDS cases were reported, with 67% of those cases in Lima. Thirty-seven percent of AIDS cases were among people between 20 and 29 years old (Peru Ministry of Health, 2005). While 40% of AIDS cases are among men who have sex with men, with a prevalence rate of 15% in Lima and 5% in other cities (Peru Ministry of Health, 2003), in 2001, the male: female AIDS ratio was 2.8, following a narrowing trend over the past decade (Alarcon et al., 2003). The prevalence of other STDs such as gonorrhea, syphilis and genital herpes is high for the general population and population segments at more risk (Cáceres & Mendoza, 2004; Sanchez et al., 1996).

barrio. Within the *barrio*, they frequently have sex with heterosexually identified men to whom they might provide gifts, money, alcohol, or clothes in exchange. In general, the social and sexual roles and identities of these men mirror a hetero-normative definition of homosexuality still common in lower income population segments in Peru (Cáceres & Rosasco, 1999). While these men tend to assume stereotypical and traditional feminine gender and sexual roles (being the receptive or "passive" sex partner), there is tremendous diversity within this group regarding how they present themselves. Their self-presentation can be a blend or fall on a continuum that ranges from being effeminate men to dressing as or enacting the role of women either part or full time. Homosexual men are at risk for HIV/STDs through unprotected sex with other homosexual and heterosexually identified men. Homosexual men comprised the second largest of the three segments recruited.

(c) *Women with multiple male partners*. Some of these women are single mothers, either living by themselves, or with their families or partners. A history of fragmented families, childhood abuse, domestic violence, and multiple abortions is not uncommon among some of these women. Some of them socialize on the street, drink and use drugs with the heterosexual men described above and engage in sex in exchange for food, drinks, clothes, or money with different male partners. In general, for these women, those behaviors and experiences distinguish and separate them from most of the other women in the *barrios*. These women are at risk for acquiring and transmitting HIV/STDs through sex with men. This segment was substantially smaller than either of the other two population segments recruited.

The condition of marginality for these three segments stems from their social and sexual behaviors and how others perceive them in the *barrios*. In general, for the three segments, health-seeking behaviors and use of local health care facilities are limited, because of lack of access, mistrust, previous bad experiences with the health care system, or health care providers' stigmatizing and homophobic attitudes (Movimiento Homosexual Organizado de Liberación, 2006). Knowledge about HIV and STDs and condom use among heterosexually identified men and women are low, and so is their awareness of risk, since they often believe that HIV is only associated with homosexual men and prostitutes. Homosexual men, on the other hand, have relatively high HIV/STD knowledge and awareness but limited ability to negotiate safer sex and use condoms.

The *barrios* are often the product of migration from other parts of the country, are located on dirt streets on the periphery of the cities, and have only basic or poor public services. The residents work in trades, own small stores, study for vocations, hold occasional jobs, or are unemployed. Life in these *barrios* is characterized by poverty, social exclusion, low educational levels, and a lack of social and economic opportunities, all factors that reflect the social inequalities in Peru (Altamirano et al., 2003). Social exclusion is a dynamic process through which large sectors of society lack the social and symbolic assets necessary for human development and well being (Muñoz, Vasquez del Aguila, & Parker, 2003). Some of the social and sexual behaviors observed among these three population segments include a commercial component part of "strategies for survival" (Bourgois, 2003), such as betting money at soccer and volleyball games, exchanging sex for money or favors, and engaging in petty crime and muggings. Many of the sexual relationships include a power imbalance, with women and homosexual men not being able to negotiate sex and condom use.

2.3. Study intervention

The name of the intervention in Peru is "*Qué te Cuentas*" (What's Up).[2] The intervention was guided by the core elements in Kelly's model as described in Section 2.1. The formative ethnographic study that we conducted in preparation for the intervention and to adapt the core elements to the context of people's lives in Peru and to the three segments in particular, included social mapping, participant observations, informal interviews with gatekeepers and stakeholders, and focus groups and semi-structured interviews with key informants belonging to the three population segments. The process of adapting the intervention included: (1) multi-site staff training on the CPOL model and the intervention; (2) developing a facilitators' training manual with the curriculum for training the CPOLs; (3) developing appropriate prevention messages to conduct conversations; (4) identifying appropriate incentives for CPOLs; (5) consulting and testing prevention messages with local experts and key informants part of the target populations; and (6) facilitators' rehearsal with key informants acting the part of CPOLs. The adaptation process will be described in detail elsewhere (Rosasco et al. "Adapting a Community-Based Social Diffusion Intervention in Peru", manuscript in preparation).

Based on the formative research, it was determined that implementation of the intervention's core elements in Peru would consist of: (1) the recruitment of 15% of the popular and influential individuals from the three segments to serve as CPOLs in the intervention (since the number of women with multiple partners was small, a small number were trained as CPOLs, by comparison with the heterosexual and homosexual men); (2) a training with CPOLs, consisting of four 2-h sessions during four consecutive weeks, for them learn how to deliver prevention messages to their peers; (3) periodic meetings (reunions) with CPOLs after the training to reinforce motivation and problem-

[2]The intervention was started in four *barrios* in Lima in August, 2003, and in six *barrios* in Chiclayo and Trujillo in January, 2005.

solving issues that arise when having conversations with peers during the intervention; (4) posters and banners placed in the neighborhoods and T-shirts with the study logo worn by the CPOLs as cues to facilitate starting conversations.

The eligibility criteria to participate as a CPOL were: (1) being popular, trusted or respected among their peers; (2) belonging to one of the three population segments; and (3) between 18 and 40 years of age. We triangulated different data sources to identify CPOLs: (1) responses to a survey with members of the population segments asking to name three friends they trusted; (2) ethnographers' participant observations in the *barrios* where those population segments gather; and (3) perceptions of key informants (gang members, hairdressers, pool hall and bar owners, etc.) belonging to the same three population segments regarding popular, trusted and/or respected individuals.

The trainings were conducted in five different waves to accommodate the number of CPOLs that we needed to train. Trainings and reunions were conducted with women and homosexual men together and separately with heterosexual men. Considering the small number of women to be trained, the financial and human resources available, and the logistical preparations necessary for the trainings, we decided to train women jointly with homosexual men since they socialize together in the venues and expressed comfort with each other. We decided to train heterosexual men separately because of their potential chauvinistic and homophobic attitudes toward women and homosexual men.

The training of CPOLs included information on sexuality; HIV and STDs; skill building exercises and role-plays on how to use effective ways of communication to deliver non-threatening, brief and informal prevention messages; and activities to reinforce the commitment to be a CPOL. The training and subsequent reunions needed to include different activities to support CPOLs to foster changes in their peers' knowledge, attitudes, and behaviors.

The content of the reunions varied to keep CPOLs engaged. Activities included presentations, videos, theater, games, and discussions. In addition, mixed social reunions and sports events with the three segments took place twice a year. CPOLs received no monetary incentives for attending the training or reunions. Instead, they were given, according to the season, T-shirts or sweatshirts with the project logo at the 3rd training session and periodically during the reunions. Food baskets containing staple items were raffled at the end of each training session and reunion. CPOLs received a "graduation" diploma at completion of the training. A free 6-month class, generally in a trade, was raffled at the end of the last training session. Dinner was provided at the end of each meeting. Transportation to meetings and money for transportation home were also provided.

The intervention prevention messages were: (1) condom use with primary or casual partners; (2) condom use when using alcohol or drugs; and (3) seeking health services. These three basic messages were used for each of the three population segments. However, the training activities and exercises applying those messages in conversations were tailored to each population segment. For women and homosexual men we stressed the skills to negotiate with their male partners about the use of condoms. With heterosexual men, we stressed the need to take care of themselves and their future families. The three population segments relate socially and/or sexually in venues such as soccer and volleyball fields, bars, pool halls, street corners, discos, and hair salons, as well as in small groups at home. These were the spaces where CPOLs held conversations with their peers and friends.

Six facilitators hired by the project worked directly with CPOLs in the delivery of the intervention. The facilitators went to the *barrios* to recruit individuals already identified as potential CPOLs through previous ethnographic research. A team of three facilitators led each training and reunion session with CPOLs. After the training and in between reunion sessions the facilitators made periodic visits to the *barrios* to encourage CPOLs to continue having conversations. Facilitators also went to the *barrios* immediately before each reunion to remind CPOLs to attend. The facilitators were selected based on their skills, experience, knowledge, and involvement with or belonging to the study population segments. The facilitators were carefully trained regarding the goals and objectives for each training session as stated in the intervention manual.

3. Process evaluation goals

The success of this community-level intervention depends on keeping the CPOLs engaged in conducting conversations and delivering prevention messages to their peers for 2 years. The multi-site PE included quantitative and observational measures to assess the number of CPOLs recruited, attendance at training and reunion sessions, number of conversations with peers, visibility of study materials in the *barrios*, and documenting external events that could influence the intervention.

In addition to the multi-site PE, for the Peru site we added a qualitative component to better understand implementation activities. The use of qualitative methods in process evaluation allows us to better understand a program by learning from the experiences and perceptions of participants and stakeholders (Patton, 2002). Thus, we expanded the PE to include staff observations of the functioning of the intervention, the impressions of the facilitators, the experiences of CPOLs delivering the intervention and, at the end of the 2 years, the perceptions of key informants (such as health providers in the *barrios*), and the response of peers receiving the intervention. Our qualitative component follows a naturalistic and anthropological approach and includes aspects of House's "transactional" evaluation model (House, 1978; Patton, 1990) to consider the processes taking place during the

intervention and the different perspectives of the stakeholders or key people involved in the evaluation.

4. Methods

The PE team (1.5 full time employees) was trained on the multi-site PE design, translated the multi-site instruments into Spanish, and developed site-specific indicators to better capture the dose of intervention delivered by CPOLs (number, periodicity, and type of conversations). A database was used to track the PE quantitative information and to send the required measures to Research Triangle Institute, the trial data-coordinating center in the USA, for multi-site analysis. The NIMH study was approved by the Institutional Review Boards (IRBs) at UCLA, UCSF and UPCH.

4.1. Data collection

Data for this paper were collected between August, 2003 and September, 2004 during implementation of the intervention activities. The primary data sources included:

(a) *Written notes from PE staff for the 56% (18 sessions out of 32) of trainings and 77% (14 out of 18) reunions they observed*. These observations helped to assess fidelity of intervention delivery and elaborated on the basic information on completion of objectives, content of activities at trainings and reunions, and facilitators' performance, gathered in a "Session Checklist" form.

(b) *Number of conversations and content of messages delivered by CPOLs*. These data were self-reported by CPOLs working with the facilitators in small groups at the beginning of each reunion session. The facilitators used an "Attendance and Conversations" form to collect this information.

(c) *Perceptions of facilitators*. Their perceptions and observations about the trainings, reunions, and implementation of the intervention were collected in writing using a "Facilitator Session Notes" form and orally during weekly debriefing meetings with the intervention and PE teams. The facilitators were encouraged to write notes as soon as possible after each training or reunion. Facilitators' impressions were based, in part, on comments CPOLs made to them during trainings and reunions or during facilitators' visits to the *barrios*.

(d) *Perceptions of CPOLs*. Through observation and interaction with the CPOLs during the trainings and reunions, PE staff and facilitators collected information about CPOLs' perceptions and opinions regarding the intervention, their role and motivation to participate, conversations and messages delivered, and reactions of their peers to those conversations. In addition, we conducted short semi-structured interviews with a convenience sample of 12 CPOLs (10% of those trained). The criteria to select CPOLs to be interviewed included variation in terms of *barrio*, population segment, training wave, and number of conversations held (see Table 1). Those criteria allowed us to

Table 1
Selection of CPOLs interviewed for the process evaluation

Population Segment	Number of CPOLs	Barrio	Number of conversations the CPOLs reported	Training wave and amount of time as a CPOL	Name of CPOL
Homosexual men	3	A	High	1st wave	R
		B	Medium	3rd wave	J
		C	Low	1st wave	P
Women	3	A	Low	3rd wave	T
		D	Medium	5th wave	H
		C	High	3rd wave	V
Heterosexual men	2	D	Low	2nd wave	L
			High	4th wave	M
	2	B	Medium	2nd wave	E
			High	1st wave	R
	2	C	Medium	4th wave	N
			High	4th wave	S
Total number of CPOLs interviewed	12				

Selection criteria to be interviewed: population segment and *barrio*, number of conversations (high: > 5/week, medium: between 5 and 2/week, low: < 2/week), and time as a CPOL.The number of conversations conducted by CPOLs varied substantially. A CPOL who owned a pool hall, for instance, maintained conversations with most of his clients, while other CPOLs only occasionally held discussions with some of their friends. While we did not have a minimum number of conversations we expected of each CPOL per week, the rationale for high, medium, and low number of conversations developed from comparing the average number of conversations CPOLs self-reported every six weeks during the periodic reunion sessions. The first training wave was held in August, 2003, the second wave was in September, 2003, the third wave was in October, 2003, the fourth wave in November, 2003, and the fifth wave in January, 2004. Thus, the difference in the amount of time between CPOLs trained in the 1st and 5th wave was six months. Approximately 10% of CPOLs were interviewed across the 4 intervention barrios (which we differentiate by the letters A, B, C, and D).

interview a diversity of CPOLs participating in the intervention. The facilitators conducted interviews with CPOLs in September 2004. Those interviews were audiotaped and transcribed.

(e) *Survey with CPOLs*. A short self-administered survey was conducted with all CPOLs to rate the training sessions and activities. The results from this survey helped to frame the rest of our data.

4.2. Data analysis

Written notes and interview transcripts were organized using Atlas ti, a qualitative software package. A team of two analysts developed an initial set of codes based on two transcripts of interviews with CPOLs, a random set of written PE observations, facilitators' notes, and notes from the debriefing meetings mentioned in Section 4.1.a. Based on that, a final list of codes was developed and the analysts coded and verified each other's work as primary and secondary reviewers. Data from all sources were summarized into domains and triangulated to identify general themes. Results were presented to intervention staff and facilitators to validate the findings.

5. Findings

5.1. Trust and rapport

Establishing trust with potential CPOLs was essential in order to facilitate their participation because of a history of marginality, a generalized mistrust of the government, and social exclusion from mainstream society in these low-income *barrios*. This was accomplished in numerous ways. First, we focused on establishing trust during an initial recruitment visit where the study ethnographers, who had already worked in the *barrios* over a period of many months, introduced the facilitators to potential CPOLs. Second, the name of UPCH (a well-known university in Lima) as a sponsor was clearly identified and vouched for the legitimacy of the project. Third, written formal invitations personally delivered to potential CPOLs also provided credibility to the project. Trust and rapport increased during the training and subsequent reunions as CPOLs witnessed the seriousness of the project and the commitment of the facilitators and the rest of the team implementing the intervention.

5.2. Participation and engagement in the trainings

Most potential CPOLs agreed to participate in the project after it was explained to them. Of 164 individuals who were asked to participate, 124 (78%) completed the training. Most CPOLs were very engaged during the training, and their interest and active participation increased from one training session to the next. This was apparent by their questions, discussions, nonverbal behavior, and willingness to practice talking to their friends in between training sessions as requested. Of the 124 CPOLs who completed the survey at the end of the last training session (see Section 4.1.e), 89% endorsed the item that they "liked the training very much", while 80% reported having "learned a lot about HIV/STDs" and "feeling very confident about talking to their peers".

There were some differences in how the three segments reacted and participated in the training. As a reflection of their social characteristics and behavioral patterns in their daily lives, heterosexual men's participation in the training was active, lively, and sometimes boisterous. They indicated, both verbally and non-verbally, when they found the role-plays and games "boring or stupid" and felt it was time to move on to another activity or topic. Women and homosexual men, on the other hand, were also engaged in the trainings, but were quieter and calmer. Women, however, needed more reinforcement and probing from the facilitators to participate, perhaps because they represented a small proportion of the CPOLs and were trained together with the homosexual men. Since homosexual men in general knew more about HIV and STDs, women might have felt self-conscious or reluctant to ask questions or volunteer answers for fear of being considered ignorant. For homosexual men, the training reinforced or clarified the information they already had. For heterosexual men and women, the training provided new information as well as the realization that they also could be at risk.

5.3. On-going support for CPOLs

The periodic reunions, which focused on problem solving, information and motivation, were extremely important in supporting CPOLs in their ongoing intervention work. CPOL attendance at the 18 reunions held during the year averaged 64%. CPOLS reported maintaining conversations even if they missed some reunions. Reasons for CPOLs to miss reunions were occasional jobs, being in jail, hiding from the police, attending a soccer game, getting ready for a party, or being drunk. Soccer or volleyball mini-championship events as social activities sponsored by the project were extremely popular among all CPOLs.

Reinforcing the importance of their work and role-playing the delivery of messages at these reunions helped CPOLs use a variety of messages and talk to a diversity of people in their *barrios*. Some examples of difficulties encountered in maintaining conversations or delivering messages and solutions that were offered in the reunions included:

- talking to friends one-on-one, if needed, in order to avoid the teasing or ridicule that CPOLs experienced in some group situations,
- stressing that these were informal and brief conversations, rather than long presentations,
- feeling that they needed to have all the answers, even for medically related questions, before they could talk to their friends,

- feeling they had to provide advice or a solution in each conversation, rather than providing a message,
- making a plan with CPOLs regarding who to talk to and where and what message to deliver. This was particularly necessary when CPOLs felt they had already talked to everyone they knew, that those people already had the information and/or had already changed.

5.4. The role of CPOLs

The facilitators explained the purpose of the intervention to CPOLs and their participation as persons identified as respected and influential with their peers during recruitment and administration of informed consent. It was explained to them that, given their influence, their role would be to encourage their friends to be safer sexually, and that they would be trained on how to speak with their friends. As the quote below illustrates, some attended the first training session with misgivings, out of curiosity, or because food was provided, but without a clear understanding of the project or their role to affect their friends' sexual practices. [I was] "First scared [of attending the initial training session], because I didn't know what it was going to be like. After I attended I liked the program" (homosexual male, CPOL). Although their role in the intervention had been explained before, even during the training some CPOLs expected only to receive educational "talks" about STDs and HIV. Perhaps because it was a new role for them, they did not expect to be trained on how to communicate and support their friends about being safer sexually.

In contrast, a year into the project, CPOLs were able to clearly define their role as being part of a network or a group and providing "advice" and prevention messages to their friends. One CPOL felt that he had, "More information about diseases, [was] more prepared for the future with the task of reaching out to people and talking to everyone so everyone carries a condom in their hand" (heterosexual male, CPOL). Another CPOL referred to his role as,

> Working in a group, being part of a network, and providing information. That is what we came for and here we are… One day we will be proud of knowing that we have done something for someone, and that maybe that person also gave that information to someone else… Maybe when we are 60 or 70 years old this will be curable and we could say that we were part of the change (homosexual male, CPOL).

As found in the PE during the year of working with CPOLs in the intervention, participation had initiated introspection, and a change in beliefs, attitudes, and their own behaviors related to health, prevention and safer sex. Said two CPOLS,

> It has helped me in the way I am. Now I think differently (female, CPOL).
>
> Yes, it has helped me. Sometimes when I am drunk, I always remember to carry a condom (homosexual male, CPOL).

In addition, being a CPOL appeared to benefit them in other ways. CPOLs enjoyed the sense of belonging to a project, sponsored by a well-known university, that they perceived to be useful and productive for themselves and others. For many CPOLs, their role had a positive impact on self-perception and self-esteem. Some CPOLs were proud of their role and of being recognized as such by friends or relatives, and wearing the identifying T-shirt with the project logo around the *barrio* became a must. One CPOL said that before he was "in the *barrio* smoking, or drinking, or playing soccer, with nothing in the brain. Now[he was] informing people about HIV and STDs, on how to prevent, …" (heterosexual man, CPOL).

In many cases, as illustrated below, participation in the project and maintaining conversations on prevention meant that CPOLs were considered differently by relatives and friends, either as someone learning, changing, doing something for others, or perhaps as a role model to emulate: "I am doing something good, something for them. People do not think anymore that I go out with so many women. Before they did" (heterosexual male, CPOL). "They call me professor, they say: 'Ask him, who goes to the Uni[versity] to learn'" (heterosexual male, CPOL).

Often, being a CPOL was seen as a "favor" that they had received, and they thanked the staff for "the chance to participate". Relatives have also thanked the facilitators for providing CPOLs the opportunity to do something beneficial for themselves and the community. Being a CPOL could mean that relatives or friends think there might be hope for someone they considered lost to society.

5.5. Conversations and messages delivered

The goal of the study is for CPOLs to disseminate prevention messages through everyday conversations within and across social groups and networks and in different venues in the *barrios*. CPOLs engaged in four conversations per week on average. The number of conversations varied according to the individual and, to a degree, according to the population segment and *barrio* they belonged to. CPOLs talked to friends, acquaintances, sex partners, and members of their families. Conversations were conducted one-on-one or with a small group. While homosexual men knew and talked to many people in the *barrio*, including women and heterosexual men, the number of conversations women had was often limited to a smaller group of other women and men with whom they socialized. Heterosexual men talked mainly with women or with other heterosexual men. Heterosexual men felt more discouraged than the homosexual men when friends did not listen or made fun of them during conversations. Many, however, continued trying to talk to their friends. One CPOL said, "At first they think I am joking, but now they see me

differently because I keep telling them. Sometimes they make fun of me. They say: 'You look like a professor!'" (heterosexual male, CPOL).

The conversations that CPOLs conducted occurred in social spaces such as bars, discos, and soccer and volleyball fields; at work, in hair salons or pool halls; or at home. The following illustrate situations or interactions when those conversations took place:

- A heterosexual CPOL was getting drunk with his friends. He asked them whether they had condoms since all of them were to visit a prostitute afterwards. He reported that his friends were surprised because he had not used condoms before.
- A female CPOL worked in a car wash together with her husband. Both of them talked to all their clients about HIV/STD prevention.
- A homosexual CPOL, who used to have unprotected sex if offered more money for sex, talked to his clients about the need for safer sex. He also told friends that if they had money to spend on their silicone breasts they also had money to buy the condoms that would save their lives.

The most common messages CPOLs delivered related to condom use and the importance of seeking testing for HIV/STDs and/or medical care, instead of going to the pharmacy for advice or to treat symptoms. CPOLs integrated the information they received in the trainings regarding ways to incorporate prevention messages into their conversations. As a result, they reported delivering non-judgmental, informal, and brief messages, sometimes with humor and in the context of jokes. Asked why people listened to her, a CPOL said, "It must be because of the way I tell them, I say it [the messages] gladly, like joking, I don't scare them, I don't talk to them with gravity" (female, CPOL).

A few CPOLs, particularly heterosexual men, attended reunions but reported having had no conversations. In those cases, procedures called for facilitators to spend extra time problem solving to determine what would help CPOLs talk to their friends. From the number of conversations reported at reunions, this coaching process helped increase their conversations to a degree.

5.6. Motivation to be a CPOL

CPOLs were motivated by a number of reasons to be part of the project and to maintain conversations. Initially, they were motivated to participate by learning new information and receiving incentives, but their motivation changed over time, mirroring the processes through which CPOLs felt more self-confident and attributed more importance to their role. Their motivation was bolstered by the response of their peers to their conversations and the on-going support of the project at the periodic reunions. A CPOL said that, "Some friends want to learn and that motivates me to participate and teach them" (heterosexual male, CPOL).

Homosexual men needed less support and reinforcement than women or heterosexual men to have conversations because they had prior knowledge and awareness of STDs and HIV, felt more at risk, or knew someone with HIV. Women were motivated by a concern to take more control of their lives, a willingness to encourage other women to do the same, and a desire to learn how to negotiate the use of condoms with their own male partners, thus decreasing the chances of infecting their future children. For heterosexual men, the interest and attention of their friends was a motivation. In many cases, encouraging or accompanying a friend to go to a health center for testing or care was seen by CPOLs as a concrete way to help. To do that, as shown by the quote below, CPOLS first had to overcome their own fear or apprehension of going to a health center: "I used to be terrified of going to the hospital, but knowing more has helped me to be more self-confident. I was able to pass on that confidence to my friends" (homosexual male, CPOL).

The social activities and soccer and volleyball events mentioned in Section 2.3 organized by the project twice a year (during the national holidays in July and around Christmas) were successful in maintaining CPOLs' interest and motivation to carry out the program, as well as building a sense of common purpose among CPOLs from different neighborhoods. Study incentives were also a motivation to participate in the project. From CPOLs' comments we know that the dinner provided at trainings and reunions may have been their only meal of the day or may have resulted in one less person waiting to be fed at home. Bringing home the raffled food basket might also have been seen by parents, partners, or other relatives as an unemployed CPOL's contribution to the household. Winning one of the raffled short-term classes was often perceived as their only opportunity to study and progress in life. CPOLs reported their motives for participating as, "Meeting new friends, here I have met people. Besides, the incentives, the classes, all that is a motivation" (female, CPOL). "Having won the class in the raffle motivates me. I am committed because of that and to help my friends" (heterosexual male, CPOL).

5.7. Acceptability of the intervention

The intervention seemed to be well accepted by the community as well as by the CPOLs themselves. As mentioned in Section 2.3, posters and T-shirts are a core element of the intervention as they provide cues to initiate conversations. Based on CPOLs' reports and facilitators' observations, the study logo on the T-shirts and posters were recognized and worked, early on, as a visual aid for CPOLs to start conversations with peers. When asked what has helped to start conversations, a CPOL stated that, "Wearing the T-shirt. The posters attract attention, they ask where they are from and I explain to them where they

are from, what they are for'' (heterosexual male, CPOL). In some cases, a protective attitude expressed toward the posters by the CPOLs and their friends, and even by other *barrio* residents, suggests a sense of ownership and recognition of the intervention as something of importance being done for the community. This is significant since very few programs seem to be ever conducted in the *barrios*, and the residents often express feeling ignored or neglected by the city or the national government. In addition, increased interest in ''*Qué te Cuentas*'' from knowing or talking to a CPOL facilitated recruitment for subsequent training waves. A CPOL said, ''They think nice, there are even some friends who want to go. They tell me: 'Listen, why don't you tell them that I want to attend?'…people call me, 'listen [Hey, you] ¿Qué te cuentas?'' (homosexual male, CPOL).

In general, CPOLs reported that their friends and peers expressed interest in the prevention messages and were willing to listen to them. The number and content of the conversations reported by CPOLs supported those statements. Some CPOLs stated that people have changed their behaviors because of the conversations and that peers look for them to ask questions and ask for condoms. ''I know them, know what they do, and I see they have changed'' (homosexual male, CPOL). Other CPOLs, however, noted that not everyone accepted the messages: ''Well, some have changed because of what I have told them, but some other ones say: 'It can't happen to me, it can't happen to me.' But it is not like that, one day it will happen to them'' (female, CPOL).

5.8. Working with the facilitators

During the first wave of trainings, facilitators needed to hone their skills and improve their rapport and interaction with CPOLs. Debriefing with the facilitators after each session was important to provide feedback, ensure adherence to the study objectives, and to prevent drift in delivery of the trainings. Facilitators' motivation and buy in were particularly important because of their role in the implementation and engagement with CPOLs. Including facilitators in the planning of sessions and activities such as icebreakers, games and role plays for trainings and reunions was also essential in order to integrate their experience and perceptions gained from working and interacting with CPOLs.

5.9. Feasibility and acceptability of implementing the process evaluation

Consistent with the different roles required for an effective PE (Donaldson & Gooler, 2003) (Dehar, Casswell, & Duignan, 1993), the PE team has performed a series of tasks, beyond monitoring a program, related to the ongoing collection and analysis of information relevant to intervention implementation. The team has worked independently but collaborated closely with the intervention team to provide weekly feedback and recommend changes to enhance the quality of the intervention. The intervention team considers that the contribution of the PE team has helped to strengthen the intervention.

The role of the PE was accepted both by facilitators and CPOLs. The debriefings with the facilitators after each session for the first wave of trainings with CPOLs were done directly by the PE team. Initially facilitators had little connection with the PE team and reported that they felt judged and somewhat intimidated by the PE feedback, which was provided in the presence of their supervisors in the intervention team. As a consequence, we changed the procedures and the PE team reported their observations to the intervention team, who in turn, provided feedback to the facilitators. The initial discomfort of the facilitators at being ''evaluated'' was overcome through interaction and increased rapport with the PE team, and after the third wave of trainings the weekly debriefings resumed in the presence of facilitators. For a discussion of stakeholders' anxiety at being evaluated, see (Donaldson, Gooler, & Scriven, 2002). As trust and rapport were established, CPOLs expressed no concerns related to completing the PE survey at the last training session, having the PE team observe the sessions, or being interviewed.

Despite initial concern by some of the intervention team members that the presence of non-Peruvians/non-Spanish speakers would be counterproductive, US members of the intervention team also observed trainings on multiple occasions. This presence did not seem to negatively impact interaction, as CPOLs were friendly and, for various reasons, interested in talking to the attending ''gringos''.

6. Discussion

The PE, conducted by an internal but independent team, helped to enhance and document the intervention. The PE has been useful to assess some of the complexities and dynamics associated with the implementation of the intervention. Beforehand, and despite extensive formative work, we had some concerns about CPOLs' willingness to participate in the intervention, particularly the segment of heterosexual men with whom prior health-related research of any kind had not been done before. However, after 1 year of intervention, it is clear that CPOLs belonging to the three segments in Lima can be motivated to participate in a long-term sexual health promotion intervention and talk to peers about HIV/STD prevention. CPOLs consider their work both important for themselves and their community and were motivated to participate. They perceive that their participation has had an effect on their own sexual risk behaviors, as well as being beneficial to their community.

The intervention could potentially have an unanticipated impact. As discussed in Section 5.4, approval by relatives and others could help to strengthen the role of CPOLs and

their motivation as well as helping to change the marginal image of the heterosexual men who do not work or study, the heterosexual women with multiple partners, and the homosexual men. Similarly, observing CPOLs enacting their role and having conversations could encourage community organizations in those neighborhoods to recognize the feasibility of working with marginalized population segments. In addition, increased use of health services by these populations could potentially impact resource allocation and health policy decisions at the local and national level.

The intervention benefited from the ethnographic and other formative research that guided its development and cultural and linguistic adaptation. Based on their acceptance, we can infer that the intervention was experienced by CPOLs as being culturally appropriate and competent. CPOLs participated in the project for a variety of reasons, including the relevance of the model in the context of their lives, and also because, in the absence of basic information and resources regarding HIV and STD prevention, the intervention was offered and available to them.

In a context of poverty and social exclusion, the conditions of marginality and the eagerness of CPOLs to be given a chance and feel more part of society and of something considered useful, seemed to positively influence their participation and the extent of their acceptance of this intervention approach. As we mentioned in Section 5.3, on average, 64% of CPOLs attended reunions. While this 64% was not always comprised of the same CPOLs, nearly all of them attended reunions periodically. We believe this percent reflects a relatively good attendance at reunions and the CPOLs' interest and motivation to participate, given their marginally social condition. However, poverty and exclusion sometimes negatively affected CPOLs' attendance and their participation in the intervention. For instance, unemployed CPOLs had to prioritize occasional work, when available, over attending reunions. Sometimes that work involved traveling either outside the neighborhood or Lima, which meant that CPOLs were not physically around or had time to talk to their friends. Also, if CPOLs were hiding from the police they did not want to be seen out and about maintaining conversations with their friends.

The willingness of CPOLs to participate because of the study incentives, albeit difficult to measure, should be considered. This is particularly true for marginal populations with unmet needs. In our study, the impact of providing food on attendance cannot be underestimated. Similarly, the small scholarships for classes we raffled were perceived by many CPOLs as their only opportunity to improve their future and find a job. Thus, the material incentives facilitated or enhanced CPOLs' participation and engagement with the intervention. However, non-material reasons, such as increase in self-esteem and self-perception of doing important work, also played a significant part in their willingness to participate.

In the economic, social, and cultural environment of the Peruvian *barrios* where surviving and bringing food to the table are priorities, health in general and disease prevention in particular are not people's main concern, especially among population segments that do not perceive HIV and STDs to affect them directly. In that environment, CPOLs have the difficult task of disseminating HIV and STD prevention messages among their peers, and becoming role models and harbingers of social change. Considering the general lack of attention to health issues among these population segments, the acceptability of CPOLs of their role, their willingness to sustain conversations, and the self-reports on their peers' response to those conversations suggest an increase in awareness in the *barrios* about STDs and HIV as a consequence of the intervention. However, while we know that CPOLs talk to peers with some frequency, it is too soon to tell whether the intervention will be powerful enough to achieve its goal to help change the social norms related to HIV and STD risk behavior. It is beyond the reach of the PE goals to assess the effect of the intervention (Chen, 1990). The outcome study will assess whether CPOLs are instrumental per se, and the intervention powerful enough, to change existing norms, sexual risk behaviors, and HIV and STD incidence.

7. Lessons learned

For this phase of the PE and in order not to unduly affect the experimental conditions of the intervention, we interviewed a small convenience sample of CPOLs, whose experience may not be representative of all CPOLs. In addition, responses could reflect a degree of social desirability, with both the facilitators and CPOLs trying to impress the evaluators (McKenzie & Smeltzer, 1997). However, if that desirability was present, we think it was counteracted in our analysis by PE observations and triangulation with other data sources.

The PE did not specifically examine group dynamics, interactions among CPOLs, or among groups of CPOLs from different neighborhoods. Our knowledge about the number and type of conversations CPOLs maintain is based on self-reports. We did not capture the dialogue between CPOLs and peers, or the extent to which the intervention dose and messages were disseminated continuously and consistently (Figueroa, Kincaid, Rani, & Lewis, 2002).

As mentioned in Section 2.3, women were trained jointly with homosexual men. While women participated, perhaps a separate training would have been more motivating to the women and facilitated the discussion of particular issues directly relevant to their lives and sexual risk behavior. For a deeper understanding of the intervention, it would be important to examine the specific factors that influence whether a particular CPOL talks to peers, who they choose to talk to, the substance and length of their conversations and conversely, what makes peers pay attention and listen

to a particular CPOL. In addition, we do not know whether CPOLs are reaching a critical mass of peers, or whether there are sections of our target populations who are isolated from the CPOLs.

8. Conclusions

Our findings indicate that the intervention has affected CPOLs' knowledge, their attitudes, and even their sexual risk behaviors. The CPOLs are engaging in the intervention and having conversations about safer sex and health-care seeking with their peers.

This process evaluation reached beyond typical intervention monitoring regarding whether activities took place as intended, and examined some of the processes and dynamics occurring during and within the intervention. The use of the PE was helpful to assess the quality of the intervention, the adherence to its core elements, the feasibility and acceptability of the intervention by CPOLs, and the contextual influences that could affect both the intervention and the study outcomes. This is a proof of concept community intervention trial, and observing training delivery and the feasibility and acceptability of the intervention among CPOLs can help us assess if the intervention is being implemented as intended and whether we can expect the intervention to be effective. In addition, the PE can also help to assess the elements related to program success or failure, and best practices necessary to replicate this intervention using the CPOL model in the future in contexts where conditions and resources might differ from those of a research environment.

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