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Resources and obstacles to developing and implementing a structural intervention to prevent HIV in San Salvador, El Salvador

Julia Dickson-Gomez,

Medical College of Wisconsin Milwaukee, Wisconsin UNITED STATES jdickson@mcw.edu

A. Michelle Corbett, MPH,

Medical College of Wisconsin

Gloria Bodnar,

Fundacion Antidrogas de El Salvador

Karla Rodriguez, and

Fundacion Antidrogas de El Salvador

Carmen E Guevara

Fundacion Antidrogas de El Salvador

Abstract

HIV prevention researchers have increasingly advocated structural interventions that address factors in the social, political and economic context to reduce disparities of HIV/AIDS among disadvantaged populations. This paper draws on data collected in three different types of low-income communities (n=6) in the San Salvador metropolitan area in El Salvador. Nine focus group discussions were conducted between January 2006 - July 2007, six with community leaders, and three with crack cocaine users, as well as in-depth interviews with 20 crack users and crack dealers. We explore opportunities and barriers to the implementation of a community-level, structural intervention. We first analyze the different forms of leadership, and other community resources including existing HIV prevention activities that could potentially be used to address the related problems of crack use and HIV in the communities, and the structural factors that may act as barriers to capitalizing on communities' strengths in interventions. Each of the communities studied demonstrated different resources that stem from each community's unique history and geographic location. HIV testing and prevention resources varied widely among the communities, with resources concentrated in one Older Central community despite a strong need in all communities. In many communities, fear of gang violence and non-responsiveness by government agencies to communities' needs have discouraged community organizing. In the discussion, we offer concrete suggestions for developing and implementing structural interventions to reduce HIV risks that use communities' different but complementary resources.

Keywords

El Salvador; HIV; structural interventions; NGOs; crack cocaine; community assets

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Correspondence to: Julia Dickson-Gomez.

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Introduction

Both HIV infection and crack use have become growing problems in El Salvador. In a sentinel surveillance study among 5 Central American countries, El Salvador was found to have a low over-all rate of HIV prevalence (0.8%), but the highest sero-prevalence rate among men who have sex with men of the 5 countries (15.3%) and a sero-prevalence rate among female sex workers of 3.2% (Soto, 2007). Our research project is the first to study the social context of HIV prevalence and sexual risk behaviors among a sample of out-of-treatment crack users in El Salvador. While quantitative data collection is still underway, preliminary analyses of survey data show high rates of sexual risk including not using condoms, multiple sexual partners, and high rates of sex for money and sex for crack exchanges. While the riskiness of sexual behaviors depends on the social context in which they occur, in particular the prevalence of HIV among sexual partners, preliminary analyses of our quantitative data suggest that the prevalence rate among crack users is approximately that seen among commercial sex workers in El Salvador, and may be even higher in some parts of the city. In spite of high risk for contracting HIV, the majority of our participants reported never having taken an HIV test or having participated in an HIV risk reduction intervention. The need to expand testing and HIV prevention to the population of crack users is urgent.

Public health researchers have increasingly advocated structural interventions to reduce disparities in disease burden, in particular HIV/AIDS infection, among disadvantaged populations (Sweat and Denison 1995; Blankenship, Bray et al. 2000; Sumartojo, Doll et al. 2000). Structural interventions have numerous definitions. The more narrow definition considers structural interventions as those “that work by altering the context in which health is produced or reproduced...[and which] locate the source of public-health problems in factors in the social, economic and political environments that shape and constrain individual, community and societal health outcomes (Rhodes, Singer et al. 2005).” A broader definition includes interventions to change community norms or social network interventions (Bonell, Hargreaves et al. 2006). Similarly, “multi-level” interventions use an ecological framework to explore the multiple contexts that affect individuals’ ability to promote their own health and avoid illness (Trickett 2009). All these approaches contrast with individually-focused, cognitive-behavioral interventions, still the most common type of HIV prevention intervention. Individual-level interventions assume that individuals have considerable autonomy to make and act on their choices. They thus focus intervention efforts on changing individual's attitudes and motivations, and providing them with the knowledge and skills necessary to make and implement healthier choices (Blankenship, Friedman et al. 2006). In contrast, advocates of multi-level, community-level and structural interventions argue that while changing motivations, beliefs and behaviors may improve individuals’ health and risk for disease, the inequitable distribution of disease burden will not change unless contextual factors contributing to health disparities are addressed (Durkheim 1897; Rose 1985).

As Blankenship and colleagues (2006) point out, while structural and multi-level interventions imply analyses of the social production of HIV-related risk, analyses of the structural determinants of health and evaluations of such interventions often constitute separate literatures and research disciplines. Discussions of the structural determinants of health are often found in fields such as social epidemiology, sociology and anthropology. These often conclude with “relatively broad warnings that prevention efforts must take into account structural sources of risk, or that prevention must be addressed as part of a broader effort to end social inequality or to promote social change (Blankenship et al. 2006; 60).” These suggestions often seem beyond the scope of what is plausible to achieve in public health interventions. Structural interventions, on the other hand, often come from the discipline of public health and take as their point of departure what is possible and feasible to change. These interventions, however, often focus on proximate causes and ignore more “upstream” causes of risk behavior

(Blankenship, Friedman et al. 2006). While these two types of analyses have traditionally remained distinct, coupling analyses of community assets and barriers to health promotion with analyses of the social, economic and historical factors that have created the conditions of HIV risk offers new possibilities for developing feasible structural interventions without ignoring more distal historical, political and economic determinants of health inequities.

One frequently used method to assess community barriers and opportunities to implement structural interventions to reduce health disparities is the “Community Asset Assessment” (Minkler 1997; Sharpe, Greaney et al. 2000). In community asset assessments, information is collected about a community in order to identify, support and mobilize existing community resources and capacities for the purpose of creating a shared vision. However, as Jackson and colleagues (2003) point out, assets assessments must take into account not only the capacities, resources and talents of individuals and organizations internal to the community, but must also assess the barriers communities face in attempting to capitalize on their strengths to build healthier communities. Often, these barriers are part of the historical and socio-political processes that helped create the health disparities in the first place. In addition, results of community assets analyses are relatively absent in the literature. Rather most published papers focus on the methodology of community assets assessments, or the process of community participation in intervention development.

The purpose of this paper is to describe results of a Community Assets Assessment to explore opportunities and barriers to the implementation of a community-level, structural intervention in different communities in the San Salvador metropolitan area. This exploration will include analyses of forms of leadership, and other resources in each community that could potentially be used to address the related problems of crack use and HIV. We also explore historical and political processes that may have led to the problems in the communities and that may act as barriers to capitalizing on communities’ strengths in interventions. We explore the existence or non-existence of HIV prevention efforts in each community. We finish by offering concrete suggestions for structural interventions in the San Salvador metropolitan area.

Methods

The research was reviewed by IRBs at the Institute for Community Research, Medical College of Wisconsin, and Universidad Centroamericana, Jose Simeon Canas. Focus group interviews were conducted between January 2006 through July 2007 with community leaders and crack users in six low income communities in the San Salvador metropolitan area. Study communities were selected to represent different types of low-income communities common in El Salvador and in Latin America. These include marginal communities (3 communities), Asentamientos Urbanos Populares, “Popular Urban Settlements” (AUPs) (1 community) and Older Central Communities (2 communities). Detailed descriptions of each of the communities are presented in the results section. Residents from the six communities discussed in this paper reported rampant crack use and sales in their communities, violent crime, and the utilization of sex exchanges among crack users as a strategy to obtain crack or money to buy crack (Dickson-Gomez, Corbett et al. In review). Each type of community has different histories that affect their assets and needs.

Focus groups with leaders consisted of 6 groups of 7 to 10 non-drug using residents, including community political or business leaders, parents and residents holding community leadership positions (such as youth group leaders, or leaders elected to serve on the community board). Eligibility criteria included being 18 years or older and either living and/or working in the community being studied. A second focus group consisting of crack users was attempted in each community, and successfully conducted in three communities (1 all male group, 2 mixed gender). The chaotic lifestyle of many crack users made scheduling a group interview difficult

in some communities, in particular in one marginal community, one of the older established communities, and the AUP community. Eligibility criteria for the crack users' focus group included being over 18 years old and having smoked crack in the last month. Focus groups were facilitated by KR, CG and GB, Salvadoran members of the research team trained in psychology and with extensive experience in qualitative research with active drug users. Focus groups began by asking participants to describe the positive and negative aspects of their communities. Interviews then explored in more detail the structural characteristics of the community including: the level of economic development; the community's history of formation; problems in the community, including gangs and crime; perceptions of the police; and community leadership and resources. Participants were also asked to describe HIV prevention needs and activities in their communities, including where residents go to obtain HIV testing, prevention information and condoms.

In-depth interviews were conducted by KR, CG and three other members of the research team who were Salvadoran, had degrees in psychology and were trained in qualitative data collection techniques. Interviews were conducted in each of the communities with a total of 20 crack users: 8 in Older Established Communities, 8 from Marginal Communities, and 4 from the AUP. Eligibility criteria included being 18 years or older, having smoked crack in the last 30 days, or having sold crack or done a favor for a drug dealer in the last 30 days. By including participants who participated in drug distribution roles, regardless of whether or not they smoked crack, we hoped to learn about participants' inclusion or exclusion from drug distribution roles. However, all those currently participating in drug distribution roles were also actively using crack. In-depth interview participants included 15 men and 5 women, and four participants who were currently selling drugs. In-depth interview participants smoked a mean of 169 times in the last month (range 8 to 800). Participants first completed a brief survey including their demographic characteristics and the frequency and quantity of use of various substances. They then were asked to describe any experiences they have had trying to quit drugs, and their knowledge and use of organizations that provide HIV or drug abuse treatment or prevention services. Participants in in-depth and focus group interviews received food items worth approximately \$5. Written informed-consent was obtained from all in-depth and focus group participants prior to being interviewed. Informed consent and project protocols were reviewed by Institutional Review Boards at the Institute for Community Research, Hartford, Connecticut, the Medical College of Wisconsin, Milwaukee, Wisconsin and the Universidad Centroamericana José Simeón Cañas, San Salvador, El Salvador.

All interviews were audio-taped, transcribed and coded collaboratively by the Salvadoran and U.S. research team using Atlas.ti. Coding occurred in an iterative process in several stages. First, all transcribed interviews were coded for the community type, community name, gender and ethnicity of participants, and the type of interview. Each interview was then coded for broad themes, such as community characteristics, and HIV prevention activities. Each family code contained several subcodes. For example, "community characteristics" included the subcodes history of formation, community leadership, community conflict, community problems, other community strengths, and level of economic development. The first several interviews were coded by the team as a group. Thereafter, coding was primarily done by AMC, KR and CG and reviewed by all co-authors. Disagreements were discussed until consensus was reached. All coding was done in Spanish. All members of the research team were fully bilingual. JD-G translated all text excerpts used in the paper. Translations were checked for accuracy by the Salvadoran co-authors (GB, KG, and CG).

Results

Each of the communities studied demonstrated different strengths and resources that could be drawn upon to develop structural interventions to prevent HIV. These differences were caused

in part by each community's unique history and its geographic location (central or peripheral) to the center of San Salvador.

The marginal communities formed as migrants fled to the city to escape the 12 year Civil War that occurred between 1980 and 1992, or after natural disasters such as the earthquake of 1986 destroyed their homes. These migrants occupied vacant land on the banks of rivers or near train tracks or bus terminals. As these communities were built, housing initially consisted of makeshift shelters made of scrap metal and other materials, and lacked sanitation services, electricity, sewage or potable water. Each of the study communities went through a lengthy process of legalization with the help of national and international non-governmental organizations (NGOs). These also helped them improve housing and infrastructure. All the marginal communities studied, however, are still characterized by residential overcrowding and poor overall infrastructure and housing quality. Residents in the communities are primarily poor and work in the informal economy (Ramirez 2001). While Salvadoran census figures cannot be disaggregated to the community level, the largest and oldest marginal community has over 50 years of existence with an estimated population over 6000 residents, while the youngest and smallest has existed for 18 years and is estimated to have approximately 500 residents.

The Asentamiento Urbano Popular (AUP) was formed as part of a government program in the 1970s to provide low-income housing through loans from the Social Housing Fund to low income workers (Lungo 2001). Like most AUPs, the AUP selected for this study is located on the outskirts of the San Salvador metropolitan area, close to the food processing and textile factories of the free trade zone. AUP communities without exception have access to basic services such as sanitation, potable water, and sewage. However like the marginal communities, AUPs are poorly planned and are characterized by residential overcrowding and a lack of recreational spaces, and have among the highest rates of violent and drug related crime in El Salvador (Cruz 1996). The AUP studied in this project has approximately 4200 residents.

The Older Central Communities have different low-income housing patterns. Prior to the 1986 earthquake, many migrants to the capital who worked in the informal economy or domestic service resided in *mesones* (boarding houses often constructed in large, colonial era houses) in neighborhoods in the center of the city (Stein 1989). While much of this housing stock was destroyed in the 1986 earthquake, a number of *mesones* still exist in the older central communities, along with other housing options, such as *albergues* (shelters) and motels. Both *mesones* and *albergues* consist of private rooms surrounding communal living spaces and are often of very poor quality. Residents are highly transient and include a large number of unemployed crack users and commercial sex workers. Because of the transience of the population, it is even more difficult to estimate the number of residents in Older Established communities. However, the Older Central Communities are among the most densely populated areas in the San Salvadoran Metropolitan area and it is not unreasonable to estimate 4000-6000 persons living in each community.

We first examine each community's leadership and organization, and other resources within the community that residents use to respond and confront daily problems of living. We then explore HIV prevention and testing activities within the communities and structural and institutional barriers to more widespread implementation of these. Table 1 summarizes the differences in community assets, and level of HIV prevention and testing services in each community type.

Leadership and Community Organization

Marginal Communities—Of all the study communities, the three marginal communities showed the strongest, most centralized community leadership and highest levels of

organization. The formalized leadership structure of marginal communities developed from their efforts to gain legal recognition, obtain legal title of their properties, and obtain credit and donations from national and international NGOs to improve their community infrastructure and housing. Early leaders, often women with children, emerged as they searched for organizations to help them retain the private land they illegally occupied after being displaced by war or natural disasters, and gather materials to build houses. They gained support from religious groups who were there as witnesses and stood by them in often violent confrontations with government agents who tried to forcibly evict them from these lands. Political recognition and obtaining international aid was contingent on having a board of directors democratically elected by all community members. All marginal communities maintain this leadership structure to the present and boards of directors have the legal authority to represent their communities to the city government and NGOs. Current leaders have a strong sense of the history of their struggle and commitment to solving community problems.

Almost all the residents of marginal communities interviewed were either among the first settlers to the community, and thus involved in the struggle for legal recognition, or had been born and raised in the community. International aid was contingent upon “mutual help,” in which community members were expected to donate their labor to the community by building streets, drainage systems and potable water systems. Participants often described this history of mutual help as one of the most positive characteristics of their communities. The experience of working together toward common goals has carried over to a sense of community in the present.

Interviewer: So tell me about the clean up days that you mentioned...

Female leader: Well, sometimes the directors decide, for example, she helps in one *pasaje* [pedestrian only streets on which the majority of houses are located], he in another, so everyone on the board of directors agrees to tell our neighbors, “On such and such a day there's going to be a clean up campaign...” That's what we do and everyone works.

This kind of community mobilization efforts and democratically elected leadership are considerable community assets that could be drawn on in developing an HIV prevention intervention.

However, all communities described some mistrust of the community leadership and accusations of corruption. This was particularly the case in one marginal community in which the former president of the board of directors was using the Community Center for his own personal profit and charging other community groups (for example youth groups) for its use. In other communities, no specific charges of corruption were made, but both community leaders and crack users described a sense of pessimism among community residents regarding their leaders and the advantages of community organization. This pessimism may partly be due to the fact that while each community had largely achieved its main goals of obtaining legal recognition, housing, and basic services, many of the problems that remain are more intractable. Government and non-governmental funds to help solve problems such as violent crime, gangs, lack of control of public spaces and maintenance of basic services frequently have been unavailable. Residents of all communities (including the AUP and older central communities) complained of a lack of police presence in their communities, with the exception of one Marginal Community that had a permanent police post. Residents in this community felt that they were being used as “demonstration project” for the government's tough on crime policies. Residents in all communities, especially crack users, complained of police corruption and reported that informants' names were leaked to gang members and drug sellers by the police. Informants suffered violent reprisals. Crack users called the police “thieves with

badges” and complained that they were frequently beaten, and their money and crack stolen by police officers.

In such a context, it is hardly surprising that community organization efforts are further impeded by fear of retaliation from criminal elements in the communities. In two of the three marginal communities, community board leaders reported being threatened by gang members who feared that community boards would try to disrupt their criminal activities.

Female leader: When they were electing a new board, there was a group of youth who were gang members who didn't want it...When I started to participate in the board, they came to talk to my husband. They asked him what it was that we talked about in the board meetings and for him not to let me be on the board, because if he didn't...they had a list of people that they were going to eliminate [kill] and they didn't know if I was on that list. So, I think that they were afraid that we [the board] would act against them.

Gangs and the threat of violence in the communities both contribute to the related problems of drug use and HIV within the communities and limit communities' willingness and ability to address these. El Salvador is one of the most violent countries in the Western Hemisphere, with a homicide rate of 120 per 100,000. Much of this violence is gang-related (Santacruz Giralte and Concha-Eastman 2001). Residents may be hesitant to work collectively to reduce the risk of HIV associated with crack use in their communities. The community boards in the marginal communities were able to function because they continuously assured gang members that they did not intend to act against them by informing on them to the police, but rather were working to improve the community as a whole.

AUP community—In contrast to the Marginal Communities, AUP community residents bought their parcels and constructed their homes with loans from the Social Fund for Housing. From its inception, the AUP community had basic services and infrastructure such as paved roads, potable water in the homes, sewage, storm drains and electricity. There was no need, therefore, for residents to organize or form formal community boards in order to obtain legality, infrastructure and housing improvements for their communities. Rather, committees and boards are formed ad hoc to address specific problems. In addition, these community boards are not centralized and do not represent the entire community. Each sector of the community, and sometimes each *pasaje*, forms its own groups to solve particular problems.

Male leader 1: Each sector or sometimes each *pasaje* has its own directors. The *colonia* [AUP community] includes everything, right, but there are other sectors [that are a part of the *colonia*]...and they don't get involved with the others. There are *pasajes*, like this one here has its own directors and we're all living in the same *colonia*. Everyone is going to speak for their own space and nothing else, and someone else is working for his *pasaje*, and that's his thing or his sector.

Interviewer: Do people support the boards or are there people who don't support the boards sometimes?

Male leader 1: Well it depends on the community's needs...and also how effective they are because if they're going to ask for our collaboration in a project...sometimes people have the expectation, like, “We collaborated, for example, [to get] security guards and they're still mugging people in the community and so what happened to the money?” So this tends to discourage people. There aren't results. The board doesn't have any power.

Colonia can be roughly translated as housing development, and as seen from the quote above does not connote the same sense of “community” as in the Marginal Communities. Rather than thinking of themselves as a group of people who have struggled together for a common cause,

residents of the AUP community may just consider their community as a place they live, and may find more in common with their more immediate neighbors than with the community as a whole. Also, like the marginal communities, the sorts of problems that this AUP community tries to solve through boards of directors and committees are the difficult problems of violent crime and maintenance of infrastructure, in particular streets badly deteriorated from constant flooding. As the participant above indicates, certain sectors of the community have attempted to solve the problem of crime, with limited success, by hiring private security.

The lack of centralized community leadership, lack of confidence by community members' in their ability to organize to solve problems, and limited coordination of efforts among various committees and boards that have formed have limited the effectiveness of leadership and collective action in the AUP. More importantly, the lack of government responsiveness to community demands for solutions to crime and deteriorating streets has led to disillusionment among residents in community organizing. However, the community acting collectively has had some success in solving other problems. For example, community residents, including the various boards and committees, reported that they were successful in closing off some unoccupied land, designated for use as a park, and preventing Nicaraguan residents who had immigrated after their homes were destroyed by Hurricane Mitch in 1998 from settling there and forming marginal communities.

Older Central Communities—Like the AUP community, the older central neighborhoods have very little formal leadership. These neighborhoods were some of the first in San Salvador. There was no need, therefore, for residents to organize for legal recognition or community infrastructure. Over time, these neighborhoods have changed from being mixed residential and commercial zones, to being almost exclusively commercial. Residents in these neighborhoods are extremely transient, and the housing that exists is also largely temporary, with most residents staying in rented rooms in *mesones*, *albergues* and *hospedajes* (motels often used for sex work). Large numbers of residents also regularly sleep on the streets. These neighborhoods are areas where commercial sex work and drug selling and use are concentrated. Residents of the older neighborhoods have migrated to the area from other parts of the city or departments in El Salvador out of economic necessity, or because they are heavy drug users. While drug users also come to the older neighborhoods simply to buy, preliminary results from our quantitative survey and in-depth interviews confirm that many crack users sleep in the area for weeks, months or years.

What leadership exists in these communities is made up not of community residents, but of those who work in the many NGOs, including AIDS Service Organizations (ASOs) and church charities, that have formed to confront the multiple problems faced by the community. Leaders reported that they had worked in these organizations between 3 to over 50 years, and constitute a more permanent presence in the community than the residents themselves.

While there are no residential leadership groups within either older central community, both were surrounded by marginal communities with strong boards of directors. Service providers in the NGOs in the older neighborhoods reported working closely with directors of marginal communities in health campaigns and other activities. In addition, special interest groups within one Older Central community, El Centro, such as sex workers and street vendors, have formed their own committees and have representatives in the municipal government. Sex workers, in particular, have organized themselves and fought for the recognition of sex work as legitimate work, supported by an NGO founded and administered by current and former sex workers. In addition to providing health prevention and treatment to sex workers, this NGO has advocated for their rights and provides vocational training for women who wish to leave sex work.

Organizational Resources—Unlike the older established communities, there are no health related NGOs and no ASOs located within the marginal communities or the AUP community. Many non-health related NGOs have worked with the marginal communities on projects, for example improving infrastructure, building schools and day care centers. These NGOs, however, are also not located within the communities. The concentration of NGOs in older central neighborhoods, in addition to being a response to the needs of residents in the communities, may also be due to the neighborhoods' central location and proximity to government offices. However, the marginal communities and AUP community all have a number of churches (Evangelical/Pentecostal and Catholic), that provide services to those in need, including providing toys and school supplies to children, food to the hungry and counseling to those who are addicted to drugs and alcohol. In fact, the majority of organizations providing substance abuse treatment and counseling in El Salvador are faith-based organizations with varying degrees of formal training (FUNDASALVA 2007). Each community also has groups of Alcoholics Anonymous, and many are open to those with addictions to substances other than alcohol. These churches and faith-based treatment organizations are more widely spread throughout the city, including in the marginal and AUP communities studied. However, these other types of organizations within communities have largely been untapped in HIV prevention.

HIV prevention and testing services—HIV prevention services are concentrated in one Older Central Community (El Centro). In El Centro there are several governmental and non-governmental organizations working to prevent HIV in high risk populations such as commercial sex workers, men who have sex with men, and transsexuals by providing information about how to prevent HIV, condoms, and testing for STIs and HIV. They also frequently engage in street outreach with these populations and have periodic testing and HIV awareness campaigns, and provide support groups and treatment to those infected with HIV. Crack using participants in El Centro described receiving HIV testing, prevention information and condoms from a variety of sources, including community-wide testing and prevention campaigns, monthly meetings at the government health clinic where condoms are distributed, and condoms and STI and HIV testing at a number of ASOs. In contrast, HIV prevention in all other communities is practically non-existent. Crack users from the other Older Central Community located close to El Centro, reported going to NGOs in El Centro to receive condoms, HIV prevention information and tests.

Residents of the three marginal communities reported that there had been some attempt by an ASO to provide educational sessions and train health promoters to prevent HIV in their communities. These attempts were largely unsuccessful due in part to residents' unawareness of them. In one marginal community, an ASO attempted to offer training in HIV prevention to community residents. A health worker accompanied one of the women on the board of directors, walking from house to house to invite community residents to attend the training later in the day. Few attended, saying they were busy with other things. However, many members of the leaders' focus group comprised of members of the community board and leaders of other community-wide groups reported that they were unaware that this training had taken place. No crack using participant from this community in either the focus group or individual interviews reported having heard of this effort. Focus group participants implied that the attempt was also unsuccessful because of residents' disinterest. This disinterest could stem from a belief that they were not at risk for HIV or the stigma related to those perceived to be at risk. Many community residents were mothers without a sexual partner or with a single male partner and, therefore, may have been correct in their assessment of low risk. However, Shedlin and colleagues found a greater than expected prevalence of HIV among monogamous women due to the sexual risk behaviors of their male partners (Shedlin, Fitzgerald et al. 2000). Stigma may have been a greater concern than the former, since residents in all Marginal Communities reported in focus group and in-depth interviews of knowing at least one neighbor

who had been infected by HIV. However, most associated HIV/AIDS with sexual promiscuity, homosexuality and crack use. It is clear, however, that community in-put and support were not gathered prior to the campaign.

In the AUP community, it appears that HIV prevention has not been attempted. All residents could identify organizations or places where HIV prevention could potentially be discussed, but none could recall ever receiving information about HIV in any of these places.

Interviewer: Are there any institutions that work here in the community to offer the HIV test or HIV prevention programs?

Male leader 3: Not that I know of.

Male leader 1: The government clinic is giving the test...

Female leader 1: If you ask for it....

Male leader 4: But everyone comes out negative (laughs)...

Female leader 2: The only talks that they give there are about cleanliness and diarrhea and all that.

Interviewer: Okay, and HIV prevention campaigns that were developed in the community.

Male leader 4: No, the most that has come here is sticking signs on the light posts, "Careful with AIDS".

As indicated in the excerpt above, crack using and non-crack using residents in all communities except the Older Central Communities had to actively seek information or HIV testing from the government health clinics. Residents in all communities, like in the excerpt above, also expressed considerable mistrust in getting accurate results from the government health clinics. Residents believed that Ministry of Health, which offers free anti-retroviral treatment to people with AIDS, would not inform them if they came out positive in order to avoid the cost of treating them. As one mother from a marginal community stated, "When you take your sick child into the government health clinic, they always tell you they are perfectly healthy, so you can imagine with a test like this that's more complicated." While the accuracy of these fears cannot be assessed, it was a common perception among both crack using and non-crack using residents and was enough to dissuade them from seeking a test.

The Ministry of Health clinics were the most frequently mentioned place where HIV testing was available for residents of the marginal communities and AUP community. At the time interviews were conducted, the Ministry of Health required those who administer HIV tests to be licensed laboratory technicians. In addition, the Ministry of Health has discouraged the use of rapid tests, fearing false positives, and required blood draws for initial and confirmatory testing, further limiting the places and personnel who can perform the test. While some ASOs (mostly located in or around El Centro) and private medical clinics can offer the test if they have licensed laboratory technicians, the only locations near the marginal and AUP communities that were economically accessible to their residents were the government health clinics.

The government health clinics were also mentioned by residents of the marginal and AUP communities as the only locations where free condoms are made available. However, unlike the government health clinics and ASOs in El Centro, residents of marginal and AUP communities claimed that they were only able to obtain from one to four condoms per visit to the government health clinics. Residents recognized that this number of condoms was insufficient to prevent the spread of HIV among the general population, let alone among crack users who frequently engaged in sex exchanges to support their crack use. They also recognized

that active crack users are unlikely to spend money to buy condoms in pharmacies to supplement the free condoms given by the health clinics when buying crack is their priority.

Discussion

Results from this study show serious deficiencies in HIV prevention and testing services in almost all study communities. El Centro was the only community with a number of NGOs regularly involved in providing HIV prevention information, condoms, and HIV testing to at risk populations. In the marginal communities, residents reported that some educational talks and trainings led by an NGO were attempted, but these efforts were short lived and unsuccessful due to lack of interest, stigma and poor publicity. In the AUP community residents had no memory of an HIV prevention effort in their community ever taking place. However, all communities recognized HIV as a problem in their community, because of the high levels of crack use and sex exchanges, and had some motivation to address the problem.

Based on these results, we initiated a participatory process to develop a multi-level HIV prevention intervention in October 2008. Results were presented in community forums and residents discussed intervention ideas and elected representatives to serve on a Community Advisory Board (CAB), made up of residents of each of the study communities, representatives from churches and NGOs, and government health workers. Working groups with active crack users were also conducted to get their input into intervention components. We presented our intervention to the Director of HIV/AIDS in the Ministry of Health to seek their support. The proposed intervention will consist of rapid testing by respected community leaders in community venues, provision of condoms without limits in high-risk and high-traffic areas within the community, community-wide HIV awareness campaigns and Peer Network Interventions with crack users. The Ministry of Health will provide training, on-going supervision and support to community HIV counselors, and provide rapid testing kits and condoms. The community will plan publicity for new HIV services, provide appropriate testing venues (often religious organizations that provide other services), and community HIV counselors. An NGO, FUNDASALVA, will provide training for Peer Leaders for the Peer Network Interventions. We are planning to evaluate the intervention and implementation process in a subsequent research project. We consider this to be a multi-level intervention because while increasing access to rapid testing and counseling and peer network interventions target individual behavior change, they also require structural changes, including changes in policy, and collaboration among previously separate organizations.

The proposed multi-level prevention intervention will draw on numerous partners in a collaborative and participatory project, and draw on communities' strengths and resources. These strengths are in many ways complementary. For example, the government health clinic and NGOs in El Centro have considerable experience in providing HIV education, counseling and testing to crack users. Marginal communities have a strong sense of community and existing leadership structures. All communities, including the AUP, have faith-based community organizations that work with vulnerable populations in their community. Drawing these resources from these different entities together will help address many of the barriers so far confronted in efforts to combat the combined risks of HIV and crack use in El Salvador.

Collaboration among different organizations is important because community resources working in isolation have been insufficient to combat HIV. However, some community resources may be more effective in preventing HIV than others. Qualitative research from this study has suggested that communities differ substantially in types of crack use sites (Dickson-Gomez, Corbett et al. In review). In older established communities, the use of private, shared, crack use sites where sex exchanges occurred was more common than in other community types. Further, in older established communities, people from outside the community entered

to buy and use crack, and, many times, participated in sex exchanges. The potential for becoming infected with HIV is therefore much higher in Older Established Communities, in spite of the concentration of NGOs to help crack users and sex workers reduce their risk. In many ways, the concentration of drug use and commercial sex work in older central communities may be a result of a breakdown in community cohesion. The stronger leadership and sense of community cohesion in Marginal Communities may be more effective in reducing HIV risk than NGOs by reducing the extent to which outsiders come into the community to buy and use drugs. These efforts were imperfect, however, and hampered by a lack of government support and resources. It is hoped that the collaborative and participatory process proposed in implementing a multi-level HIV prevention intervention may have the added effect of improving community cohesion and efficacy in all community types (Trickett, 2009).

Multi-level interventions such as those we propose must address barriers to implementing such programs. Stigmatization of crack users and commercial sex workers, and disinterest in HIV prevention must be addressed through media awareness campaigns or other consciousness raising activities. The level of trust in community leadership must be assessed. In cases where community leadership has been discredited or is non-existent, other respected organizations within communities could be used instead. Constant communication and follow-through on intervention planning is needed to avoid community disillusion and loss of momentum.

Community fear of gangs and drug sellers must also be addressed. In some cases, gang leaders and drug sellers may be approached and assured that intervention efforts will not negatively affect their interests. This is particularly feasible for risk reduction interventions such as our proposed intervention. In fact, fear of confrontation with gang members and drug dealers was a constant concern for CAB members and crack users and intervention components were selected or rejected based on the probability that they would cause alarm and reprisals from these groups. More trust in police and a greater level of public security is necessary for community members to organize to confront drug dealers and gang members more directly in their communities.

Mistrust in government health clinics and the lack of priority given to HIV prevention in government health clinics, except the one located in El Centro, is a further barrier that must be addressed in a multi-level HIV prevention intervention. The NGO in El Centro could provide training to government health clinics in other areas of the city. Such training should provide information about growing prevalence among heterosexuals and, in particular, crack users, and encourage testing among all patients who are sexually active. Trainings must also address HIV related stigma among providers. Finally, training providers in how to talk to patients about their sexual health and potential risk behaviors is imperative.

As mentioned by Blankenship et al. (2006), many times changes in law and policy need to occur before structural interventions can take place, and these changes are in themselves structural interventions. At the beginning of the project, the Ministry of Health allowed only licensed laboratory technicians to administer HIV tests. While many private clinics also provide the test, services from these must be paid for out-of-pocket or by private insurance, making these clinics prohibitively expensive for the low-income residents of the study communities. In addition, the use of rapid testing was discouraged, further limiting the locations and persons who can administer the test. While there is concern that rapid tests increase the probability of false positives, the WHO now recommends that initial screening tests have high sensitivity to avoid false negatives (Menard 2003). An additional concern is the ability of the health system to absorb and provide accessible treatment if a substantially greater number of people is identified with HIV, and that rapid testing may take resources away from prevention (Logie 2004). The Ministry of Health has been providing free anti-retroviral treatment to those infected with HIV/AIDS since 2002 (Ministry of Public Health and Social Assistance 2008).

Coordination with the Ministry of Health for confirmatory testing and follow-up care is a necessary pre-condition to scaling up rapid HIV testing and counseling. Further, knowing one's positive sero-status may help a person to change his or her behavior to reduce the possibility of transmitting the infection to others (Sweat, Gregorich et al. 2000).

We believe that expanding rapid testing in community venues, such as churches, community houses, or other organizations, administered by non-medical staff trained in appropriate test administration, and pre- and post-test counseling will improve the accessibility of HIV testing in low-income communities in the San Salvador Metropolitan areas. These organizations are more trusted by community residents, thus increasing acceptability of the HIV test. Many, including faith based organizations, already embrace stigmatized populations of crack users within their communities. The Ministry of Health will work directly with these organizations to provide technical training or personnel. However, some changes in organizational philosophy may need to occur among community organizations, for example to incorporate risk reduction into religious organizations' abstinence only models. In the intervention development process described briefly above, CAB members demanded more access to rapid testing in community venues. The Ministry of Health so far has been supportive of this initiative because of the relatively low cost of implementing testing in such sites and the recognition that HIV testing and counseling needs to expand to reach larger segments of the population. We and the CAB have also identified organizations or sites within the community that could be used as rapid HIV testing sites. While some sites initially approached refused to extend their support because of differences in their mission and our HIV prevention goals, others organizations have agreed to expand their services to incorporate HIV testing and prevention. The extent to which organizational philosophies and other characteristics facilitate or impede implementation of an HIV prevention intervention is a topic in need of further study, and one that we hope to address in a subsequent research project.

The concentration of NGOs providing HIV testing, prevention and treatment services in El Centro may point to a larger structural barrier to more universally accessible HIV services in the San Salvador Metropolitan area. A number of researchers have both noted and voiced concern over the tendency for global health initiatives (such as the Global Fund to Fight Against AIDS, Tuberculosis and Malaria) and other international donors to fund non-governmental agencies to deliver services (Kelly, Somlai et al. 2006; Doyle and Patel 2008). The arguments for choosing NGOs to deliver health services is that governments often lack legitimacy, and that NGOs are expected to deliver services efficiently to hard to reach populations due to their technical expertise in delivering health services. The assumption that NGOs are better at reaching hard to reach populations stems from a further assumption that they are representative of the populations they serve (Doyle and Patel 2008). Some of the NGOs in El Centro were founded and staffed by the members of the vulnerable populations they serve. However, their geographic reach was limited. While El Centro is surely an epicenter for crack use and sales and commercial sex work, all of the communities included in this paper also had considerable problems with crack use and sex exchanges and therefore need of prevention services. Even though government health clinics were underutilized for HIV testing and prevention services, they were more accessible than the NGOs in El Centro to residents of the other low income communities, as they were located within walking distance of all communities studied.

A further criticism of the tendency to bypass government in funding health initiatives is that it further delegitimizes government agencies (Doyle and Patel 2008). Providing necessary preventive health services is seen as a responsibility of the state. The mistrust that community residents expressed in receiving accurate results from Ministry of Health clinics parallels the lack of legitimacy in the eyes of community residents of the government as a whole. It is not surprising that community members are skeptical that they will receive free anti-retroviral treatment from a government that cannot provide them with street lights, passable roads or

public security, or, in the case of Marginal Communities, that violently worked against residents in their attempts to obtain housing. However, funding NGOs and excluding the Ministry of Health not only will perpetuate the lack of accessibility to HIV testing and prevention in less centrally located low-income communities, it also represents a missed opportunity for the government to gain legitimacy. In order to accomplish this, the Ministry of Health should work closely and in collaboration with community leaders and organizations to expand HIV testing and prevention outreach and services, as proposed in our multi-level prevention intervention.

Finally, international research has shown that both governmental and non-governmental agencies are seriously underfunded to provide adequate prevention services (Kelly, Somlai et al. 2006). In these cases, HIV prevention interventions may concentrate on the “low hanging fruit” or those populations that are easiest to serve. In El Centro, the concentration of crack users and commercial sex workers in a relatively confined geographical space makes intervention relatively easy. NGOs in El Centro reported working collaboratively with marginal communities to deliver HIV and health promotion campaigns, but these marginal communities were almost exclusively those located near El Centro. In contrast, entering into the low-income communities studied here and gaining the trust of community residents is considerably more difficult. These communities were located farther from El Centro, thus necessitating the transportation of health workers. Working with community organizations or Ministry of Health clinics located nearer the communities may help overcome these barriers. While the multi-level HIV prevention intervention will not change funding trends from International NGOs or increase the pool of resources, it does represent a relatively inexpensive way of increasing testing services. In addition, demonstrating the feasibility, cost-effectiveness, and impact of such an approach through carefully constructed research may help change future funding trends.

Community Assets Assessments as used in this paper provided a clear picture of communities’ HIV prevention needs, potential resources that could be mobilized, and historical and political processes that have prevented community members from confronting the problem of HIV in their communities. Such analyses are a necessary precondition to the development of feasible prevention activities that also acknowledge and challenge existing power structures that contribute to health inequities. Publication of the results of Community Assets Analyses is needed and can help build a bridge between the abstract analyses of structural determinants of health and pragmatic interventions to address these.

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References

- Blankenship KM, Bray SJ, et al. Structural interventions in public health. *AIDS* 2000;14(Supplement 1):S11–S21. [PubMed: 10981470]
- Blankenship KM, Friedman S, et al. Structural Interventions: Concepts, challenges and opportunities for research. *Journal of Urban Health: Bulletin of the New York Academy of Medicine* 2006;83(1):59–72. [PubMed: 16736355]
- Bonell C, Hargreaves J, et al. Should structural interventions be evaluated using RCTs? The case of HIV prevention. *Social Science and Medicine* 2006;63:1135–1142. [PubMed: 16697512]
- Cruz, J. La violencia en El Salvador.. In: Cruz, L. G. a. J., editor. *Sociedad y Violencia: El Salvador en la Pos-guerra*. UCA; San Salvador: 1996.

- Dickson-Gomez J, Corbett AM, et al. Structural factors influencing patterns of drug selling and use in the San Salvador metropolitan area. *Medical Anthropology Quarterly*. In review.
- Doyle C, Patel P. Civil society organisations and global health initiatives: problems of legitimacy. *Social Science and Medicine* 2008;66:1928–1938. [PubMed: 18291566]
- Durkheim, E. *Le Suicide*. Contant-Laguerre; Bar-le-Duc: 1897.
- FUNDASALVA. Características del Perfil de Usuarios de Organismos No Gubernamentales en El Salvador: Programa Centroamericano de Enseñanza y capacitación para la prevención del uso indebido de drogas y violencia. FUNDASALVA; San Salvador, El Salvador: 2007.
- Jackson SF, Cleverly S, et al. Working with Toronto neighborhoods toward developing indicators of community capacity. *Health Promotion International* 2003;14(4):339–350. [PubMed: 14695365]
- Kelly JA, Somlai A, et al. Programmes, resources, and needs of HIV prevention nongovernmental organizations (NGOs) in Africa, Central/Eastern Europe and Central Asia, Latin America and the Caribbean. *AIDS Care* 2006;18(1):12–21. [PubMed: 16282071]
- Logie DD. Reframing the HIV/AIDS debate in developing countries: and effective equitable response. *Rural and Remote Health* 2004;4(online)
- Lungo, M. *Economía Política de la Vivienda en El Salvador*. Federación Uruguaya de Cooperativas de Viviendas por Ayuda Mutua; Montevideo, Uruguay: 2001. *Producción Social del Hábitat y Neoliberalismo: el capital de la gente versus la miseria del capital*.
- Menard D, Mavolomade E, et al. Advantages of an alternative strategy based on consecutive serological tests for detection of HIV antibodies in Central African Republic. *Journal of Virological Methods* 2003;111:129–134. [PubMed: 12880928]
- Ministry of Public Health and Social Assistance. El Salvador: One step ahead on the response to HIV/AIDS and tuberculosis. M. o. P. H. a. S. Assistance; San Salvador: 2008.
- Minkler, M. Introduction and overview.. In: Minkler, M., editor. *Community organizing and community building for health*. Rutgers University Press; New Brunswick, NJ: 1997.
- Ramirez, VA. Monitoreo y evaluación del componente organizacional y liderazgo del proyecto social de la violencia y delincuencia. Consejo Nacional de la Seguridad Pública; San Salvador: 2001.
- Rhodes T, Singer M, et al. The social structural production of HIV risk among injecting drug users. *Social Science & Medicine* 2005;61(5):1026–1044. [PubMed: 15955404]
- Rose G. Sick individuals and sick populations. *International Journal of Epidemiology* 1985;14:32–38. [PubMed: 3872850]
- Santacruz Giralt, M.; Concha-Eastman, A. Barrio adentro: La solidaridad violenta de las pandillas. Instituto Universitario de Opinión Pública; San Salvador, El Salvador, OAS: 2001.
- Sharpe P, Greaney ML, et al. Assets-oriented community assessment. *Public Health Reports* 2000;115:205–211. [PubMed: 10968755]
- Shedlin M, Fitzgerald A, et al. Risk factors for HIV among housewives in San Salvador. *AIDS & Anthropology Bulletin* 2000;12(1)
- Soto RJ, Ghee AE, et al. Sentinel surveillance of sexually transmitted infections/HIV and risk behaviors in 5 Central American countries. *Epidemiology and Social Science* 2007;46(1):101–111.
- Sumartojo E, Doll L, et al. Enriching the mix: incorporating structural factors into HIV prevention. *AIDS* 2000;14(Supplement 1):S1–S2. [PubMed: 10981468]
- Sweat MD, Denison JA. Reducing HIV incidence in developing countries with structural and environmental interventions. *aids* 1995;9:s251–57. [PubMed: 8819593]
- Sweat M, Gregorich SE, et al. Cost-effectiveness of voluntary HIV-1 counselling and testing in reducing sexual transmission of HIV-1 in Kenya and Tanzania. *Lancet* 2000;356:113–121. [PubMed: 10963247]
- Trickett EJ. Multilevel community-based culturally situated interventions and community impact: An ecological perspective. *American Journal of Community Psychology* 2009;43:257–266. [PubMed: 19333751]

Community Assets by Community Type

	Marginal Communities (3)	AUP Community (1)	Older Central Communities (2)
Leadership Structure	Democratically elected leadership with legal authority to represent community	Leadership is ad hoc, formed to solve specific problems, represents smaller geographical sectors	No leadership of residents in community. Community leadership consists of NGO and religious organizations
Sense of Community/ Shared Purpose	Most residents were founders or were born in the community. Worked together toward common goal of gaining legal title to lands and obtaining infrastructure. History of mutual help.	Residents did not need to work together to legalize community. Most residents are home owners. Residents work with neighbors to solve problems, although not necessarily as a community.	Residents are very transient, and include large populations of Commercial Sex Workers and drug users. Housing is rented hourly, daily, weekly or monthly.
NGOs	Community history of working with national and international NGOs to obtain legal tenure to their lands, and improve housing and infrastructure. No NGOs located within the communities.	Little experience working with national or international NGOs. No NGOs located within the community.	Concentration of NGOs in one Older Central Community
Other Organizations	Churches helped in struggle for legalization, offer meal services, drug treatment, child care.	Churches involved in counseling for those involved in drug addiction.	Churches are involved in HIV prevention with at risk populations.
HIV Testing	No HIV testing services in the communities. Must go to government health clinics where testing services are underutilized and mistrusted.	No HIV testing services in the communities. Must go to government health clinics where testing services are underutilized and mistrusted.	Several non-governmental and governmental organizations offer testing in one of the communities, el Centro and testing campaigns. Crack users from the other Older Central Community go to El Centro for HIV testing.
HIV Prevention	A few short-term HIV prevention interventions have been attempted by ASOs.	No HIV prevention outreach or awareness campaign reported.	El Centro has several programs through the various ASOs offering prevention information, condoms and STI testing to high-risk populations.