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Understanding the Barriers that Reduce the Effectiveness of HIV/AIDS Prevention Strategies for Puerto Rican Women Living in Low-income Households in Ponce, PR: A Qualitative Study

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Abstract

Background—The HIV/AIDS epidemic has been strongly felt in Hispanic/Latino communities. Estimates of AIDS prevalence among Latinos in the US reveal that just nine States and the Commonwealth of Puerto Rico account for 89% of the Latinos living with AIDS in 2004. Previous research reveals social and cultural factors play an important role in HIV prevention.

Methods—Four focus groups were conducted, with 39 women, ages 21–67, participating in the discussions. The objectives of this research were to assess knowledge regarding HIV transmission among women living in low-income households, to ascertain barriers to safe sex in this population, and to elicit opinions about effective prevention strategies.

Results—Our results suggest that participants recognized HIV/AIDS modes of transmission and risk behaviors, as well as their barriers to practicing safe sex. They identified promiscuity, unprotected sex, infidelity, drug and alcohol use, and sharing syringes as behaviors which would place them at risk of HIV/AIDS transmission. They specifically identified lack of negotiating skills, fear of sexual violence, partner refusal to use condoms, and lack of control over their partner's sexual behavior as barriers to practicing safe sex. Finally results also indicate that current HIV/AIDS prevention strategies in Puerto Rico are inadequate for these women.

Discussion—To address these issues the authors suggest cultural and social factors to be considered for the development of more effective HIV/AIDS prevention programs.

Keywords

Culture; Women; HIV/AIDS prevention; Latino; Public housing

Introduction

Since its inception more than 20 years ago, the HIV/AIDS epidemic has been (and continues to be) strongly felt in Hispanic/Latino communities; members of this population—specifically in Puerto Rico and other Caribbean nations—have been particularly hard hit [1, 2]. Estimates of AIDS prevalence among Latinos in the US reveal that just nine States and the Commonwealth of Puerto Rico account for 89% of the Latinos living with AIDS in 2004 [3].

The Puerto Rico Health Department reported that as of April 2007, the number of AIDS cases on the island was 31,798, with women representing 24% of the adult cases. The principal mode of HIV transmission among women is heterosexual contact [4], and this mode is increasing at a greater rate in women than in men. Biological factors make females two to four times more susceptible to contracting HIV than men [5]. These factors include the soft tissue in the female reproductive tract tears easily, producing a transmission route for the virus. Additionally, vaginal tissue absorbs fluids more easily, including sperm, which has a higher concentration of the HIV virus than female vaginal secretions and may remain in the vagina for hours following intercourse [6]. However, social and cultural factors made play a more important role. For example, both the presence of machismo in the majority of Hispanic societies, as well as the subordinate role of most Latin women are expected to extend to sexual matters, increasing the likelihood of heterosexual transmission [7, 8]. Therefore, one of the major social factors contributing to increased risk is gender inequality.

“Gender” is a social construct that differentiates the power, roles, responsibilities, and obligations of women from those of men. Gender roles, norms, and expectations vary over the life cycles of women and men, as well as, within and between cultures. As a result, there are significant differences in what women and men can or cannot do in one culture compared to another [9]. The Puerto Rican culture, like other Latino societies, stresses a very strong gender difference from birth, which is reflected in every aspect of sexual expression and male-female interaction. The predominant tenet of machismo is that males are superior to females, who are sexual objects whose aims are to fulfill men’s desires and needs. In Puerto Rico, these ideas are more prevalent among the members of the low-income population, who are associated with more traditional gender values [10].

Research and prevention intervention programs addressing this particular target population has shown that for interventions to be effective among ethnic minority populations, they must be presented in a socio-cultural context while having gender specificity and a sound theoretical framework [11]. According to previous research, a number of social and contextual factors have been identified as important in HIV-risk behavior for women- and are interrelated to such a degree that it would be difficult to find a woman at risk for HIV who had only one influential factor. Most women, in fact, have experienced relationship

influences on their behavior and discrimination associated with gender, race, and/or cultural issues [12].

A recent consensus in the fields of public health and health communication reflects an increasing recognition of the important role of culture as a factor associated with health and health behaviors and a potential means of enhancing the effectiveness of health communications programs and interventions [13–16]. By understanding culture and communication, one can begin to develop and implement appropriate and effective strategies to improve the lives of Puerto Rican women. However, impoverished women living in Puerto Rico have been ignored with respect to this type of research. It is important to consider that the cultural influences of living in public housing for women in Puerto Rico may be significantly different from that of other impoverished women living stateside. Therefore, this research had three objectives: to assess knowledge regarding HIV transmission among women living in low-income households, to ascertain barriers to safe sex in this population, and to elicit opinions about effective prevention strategies.

Methods

This study recruited 39 women, ages 21–67, all residents of the largest public housing development in the southern region (Ponce, Puerto Rico); after recruitment, the participants were divided into four focus groups. The housing complex was selected as the study site for its convenience of sampling and its size. Prior to commencing, a review of publications revealed only one study that had specifically targeted high-risk women residing in low-income public housing projects (this being in the metropolitan area, almost 20 years ago) [17]. This finding suggests that women living in Ponce, PR, have not been aggressively targeted for research and prevention efforts. In addition, more than 5,200 cases of AIDS (16% of the total cases in Puerto Rico) have been reported in the southern region of Puerto Rico and considered an important target for AIDS preventions activities. Approval for the study was obtained from the Ponce School of Medicine IRB committee.

Recruitment

Focus group participants were recruited via posters that were displayed throughout the public-housing complex. Information on the posters included the study's purpose, recruitment dates, place, and time, focus group duration, incentives, the number of women needed and contact information. Posters were placed in the housing complex areas identified by the social worker as being highly visible (i.e., administrative offices, residential buildings, mailboxes). Women were invited to visit the community center where research assistants would be screening potential participants; eligible women would then be scheduled for inclusion in one of the four focus groups. The inclusion criteria for the focus groups were as follows: the participant must be a woman between the ages of 21 and 69 (inclusive); must be sexually active; and must be a resident of the designated public housing. Using a megaphone, research assistants drove to the public housing complex and announced the visit (one day prior to the scheduled occurrence). The week before our focus groups were to meet, research assistants confirmed participants' availability by phone.

Of the 44 participants recruited and whose attendance was confirmed, seven did not show. There were a total of 39 participants (an unexpected addition of two women who accompanied their family members to the focus groups were recruited). One participant left before completion of the first focus group for medical reasons.

Procedures

The focus groups were conducted in the public housing facilities and were administered in Spanish by a facilitator trained in focus group methodology and experience in HIV qualitative research. The facilitator was assisted by an observer who was in charge of writing about non-verbal communication and noting main themes and issues arising from the discussion in order to facilitate classification and coding of the answers after they were transcribed from the audiotapes. Research assistants helped reduce possible distractions by entertaining the children who were present.

Four focus groups were conducted, with a total of 39 women participating in the discussions. These discussions were held on two consecutive days, one session in the morning and another in the afternoon; each session lasted approximately two hours. The meetings took place in the community center of the public housing complex; the location.

Before each session, researchers built rapport through an informal presentation. Researchers introduced themselves and informed the participants of the study's purpose and explaining how their involvement was necessary for the study goals. After the informed consents were distributed, completed, and collected, a demographic survey was administered. Participants were explained that their involvement was voluntary and they could leave the study at any time. They were further informed that their participation was confidential and that their identity would be protected to the best of our ability, recognizing that co-participants could tell others who participated in the focus group. Since all of the women lived in the same complex and because some of the women were family, the facilitator reminded the volunteers the importance that the information discussed during the focus group or the participants should not be disclosed. A compensation of \$20 and refreshments were provided to participants.

Specific, open-ended questions were developed in order to obtain information pertaining to our research interests, i.e., the level of knowledge regarding HIV transmission that is possessed by women living in low-income households, the barriers to safe sex that these women encounter, and opinions about what would constitute effective HIV prevention strategies. The guiding questions for the focus group are included in the Appendix.

Analysis

All focus groups were tape-recorded; the resulting recordings were transcribed verbatim. The transcriptions were then reviewed and manually coded by the research facilitator and observer. A "transcription sheet" was used to analyze the information. The information for each focus group was transferred onto the "transcription sheets" and divided into three columns: *transcription*, *main themes*, and *sub themes*. Data were analyzed using a content analysis technique, which identified the emergent themes, or trends, within the focus group

transcripts. Analysis of the focus group data included organizing and dividing the data into a useful scheme and, afterwards, identifying criteria for organizing the thematic codes. The facilitator and observer conducted the first content analysis of the material independently. The determination of the issues and patterns of responses from the participants were reached separately by the facilitator and observer, comparisons were subsequently drawn and a joint agreement was reached. The objective of this procedure was to corroborate interpretations and minimize the effect of any subjective interpretation of the data. Specific quotations were extracted to further provide context and meaning to abstracted themes and deeper meaning to the identified themes. Pseudonyms have been used to protect the participants' identities. The study was approved by the IRB of the Ponce School of Medicine.

Results

Sample Characteristics

The 39 women were 21–67 years old with a mean age of 39. Eighteen percent (18%) of the participants had some elementary education, finishing only the sixth grade or less. On average, the highest educational level reached by the participants was the ninth grade. The percentages of unmarried women and women living in some kind of marital arrangement (either legal or common-law marriage) were 46.2% each. Ninety-two percent (92%) had given birth; the average number of children per woman was 3.44. Of those with children, 52.8% indicated that all of their children had the same father. Ninety-five percent (95%) of the participants were unemployed, considering themselves to be homemakers. The majority of the participants were acquainted with persons who were infected with HIV/AIDS and acknowledged that they knew someone who had died of AIDS. Table 1 presents the demographic characteristics of the focus group participants.

Knowledge about Risk Behavior

Given the fact that socio-cultural factors influence risk behaviors associated with HIV transmission, particular behaviors were affecting our target population were explored.

Being Sexually Active or being Active with Multiple Sexual Partners—

According to the participants, the mere fact that a woman is sexually active places her at risk. The more partners she has, the higher the risk. In addition, the sexual partners may be HIV-positive and not have disclosed their status.

Edna explained a woman's vulnerability due to lack of disclosure on behalf of her sexual partner(s):

- There are men who have it and don't tell women. Just like there might be women who have it who aren't going to tell the man... and it's risky if you go to bed with him. *[Hay hombres que lo tienen y no se lo dicen a las mujeres. Como también puede haber mujeres que lo tengan y no se lo van a decir al hombre... y se riega si te acuestas con él.]*

Promiscuity and not knowing your sexual partner well were both mentioned as risk behaviors. Women who fall for good-looking men and have sex without protection were

described as thrill-seekers (*arriesgadas*) who did not consider the consequences of their actions (*no piensan*).

According to Ivette:

- Going to bed with just anyone. [*Acostarse con cualquiera.*] increases your risk for infection.

Unprotected Sex—The participants emphasized that having sex without a condom was another unsafe behavior. The condom was recognized as functional though not infallible.

Making her insecurities plain, Marilyn had this to say regarding condom use:

- The condom is not a hundred percent safe because there are men who use them and have the disease and can make you ill. [*El condón no es 100% seguro porque hay hombres que se lo ponen y tienen la enfermedad y te pueden enfermar.*]

To which Sofía replied:

- Nothing in life is completely certain, but it (a condom) helps. [*Nada en esta vida es seguro pero ayuda.*]

Infidelity—Even though some of the women proclaimed that males and females have the same rights in terms of sexual activity, men are still perceived as being more promiscuous and therefore more likely to engage in extramarital affairs. The participants strongly believed that many husbands or male sexual partners place their wives at risk. The notion that men could be unfaithful to their spouses and infect them was prevalent, even though infidelity by women was also acknowledged. Some women talked about men's sexual promiscuity and the need for women to ask men to use condoms or consider using the female condom.

María remembered a conversation with a health provider:

- They (the health providers at the health center) gave me some condoms. I told them that I had a husband, I was married, I had a companion. But she told me, “It doesn't matter...your husband goes out; you don't know what happens when he is on the street. You know about yourself, but you don't know what he does”. [*Me dieron unos condones. Yo le dije... yo tengo esposo, soy casada, tengo compañero, y ella me dijo, “No importa... Tu compañero sale, tú no sabes lo que pasa en la calle. Tú sabes de ti pero no sabes lo que él hace.”*]

Four women stated that their husbands worked in a distant municipality and did not spend the week at home. They commented that their husbands “better be playing fair” in terms of not having extramarital relations [*más vale que estén jugando limpio*]. Their comments suggest suspicion on their part, yet they accept it as being beyond their control. None of the women were able to ensure that their husbands would not have (or were not already having) sex with other women. Furthermore, not one of these women mentioned asking her husband to use a condom during sex.

Alcohol Use—The use of alcoholic beverages was also mentioned as a risk behavior, though not in every focus group. Alcohol was depicted as decreasing inhibitions and affecting good judgment.

Cristina commented on how alcohol can affect your judgment:

- You put yourself at risk when you consume a lot of alcoholic beverages. ... You get a little high, and you don't think. ... Many girls go to the clubs, to dance, they meet some guy, get a little stoned, drunk, and ... I know! Let's mambo! [*Uno se pone en riesgo cuando ingiere muchas bebidas alcohólicas... como que le da esa notita pues entonces uno no piensa. Muchas jóvenes se van a los clubs, se van a bailar, conocen a cualquier muchacho, están así medio picaítas, borrachas... ¡Yo sé! ¡Vámonos p'ál mambo!*]

Use of Intravenous Drugs and Shared Syringes—Many participants identified the use of intravenous drugs as the most frequent risk behavior. Drug addicts are perceived as fixated with the thought of injecting themselves and other considerations are suppressed next to drug dependency.

Carmen described her opinions on the effects of drugs:

- Drugs cloud your judgment. Addicts use the same needle. That's why, right now, a needle is the most common way to get AIDS. [*Las drogas te nublan. Los adictos usan la misma jeringuilla. Lo más así que se pega es por la jeringuilla hasta ahora.*]

Isabel stated:

- Most of the [AIDS sufferers] are addicts. That's how they get it [AIDS]; that's how it spreads... it's the needles... the exchange of needles. [*La mayoría son adictos. Porque ahí... es que se pega... ahí es que la jeringuilla; el cambio de jeringuilla.*]

In addition, a few women stated their belief that sexual partners of an injection drug user are also vulnerable. They specifically mentioned that young people, particularly women, are placed at risk by a partner who is an intravenous drug user and who might be engaging in needle sharing.

Barriers to Safe Sex

As part of our objectives, we tried to identify whether these particular cultural ideals serve as barriers in preventing low-income women in the Ponce region from engaging in safe sex practices.

Lack of Control over Partner's Behavior—Participants stated that good communication is not enough since men tend to be unfaithful, and they [the women] have no control over their partners' behavior. Though laughing as she said it, one woman's comment underscores this view of men as well as her general perception regarding a woman's lack of control:

- There is another alternative, if he infects me, I'll kill him. [*Hay otra alternativa; me lo pega, ¡lo mato!*]

Most of these women feel stymied when it comes to how to deal with their spouses or sexual partners; they realize that, from a sexual health standpoint, they have little or no control over the men in their lives. To make matters worse, most of the participants have little confidence in the faithfulness of their partners. Thus, they believe that their health is constantly being put at risk; while they acknowledge that they have alternatives that aid them in diminishing their risk of becoming infected, they feel prohibited (by social imperatives) from using these alternatives.

In a bitter and forceful tone, Irene asserted:

- People say, "Give your husband everything so he doesn't go out to the street to look for what he's not getting at home." But even if you give him everything, he's always looking for another woman on the street! [*Hay gente que dice "Dale todo a tu marido para que no te las pegue en la calle". ¡Aunque tú le des todo a tu marido, siempre busca otra en la calle!*]

Fear of Physical Violence—The threat of physical violence and the fear of abandonment can act as significant barriers for women when negotiating condom use and discussing fidelity issues. Some expressed the belief that their male partners would get annoyed if they suggested using condoms. Very few admitted to openly discussing condoms with their sexual partners.

Partner's Refusal to Use a Condom—Others said that men complain that their sexual pleasure is not the same when using a condom. Some women stated that there are men who threaten them with abandonment if forced to use condoms. When this comment was made, many women exclaimed: "Let them leave!" [*¡Que se larguen!*]. While these women claimed that if their partner refused to use a condom they [the women] would ask them to leave, other data indicate that they do not actually do so, instead they have unprotected sex. These remarks about men's refusal to wear condoms and threats of abandonment emphasize the lack of power that many of these women have within their sexual relationships.

Lack of Negotiation Skills—Many women stated that making men use condoms involved negotiation. Some men could not perform with a condom while others complained that the sensations were not the same with a condom.

Juana expressed her feelings about sex with condoms in this way:

- "The bad thing is that some men don't like them [condoms]. They don't like them because they can't get it up... And some feel [pleasure], but others—with a condom- say that it doesn't feel the same." [*Lo malo es que a algunos hombres no les gusta. No les gusta porque no se les para. Y algunos sienten, pero otros... con condón... dicen que no sienten igual.*]

Intervention Strategies

Focus group questions were divided in order to address sources of information, types of activities and gathering places, source factors that influence communication, and specific strategies for an effective intervention. As part of our investigation we wanted to understand what characteristics were essential for our target population in order for these to be included in prevention programs and health education.

Sources of Information—Most of the participants agreed that meetings in small groups seemed to be the most comfortable way to discuss such a sensitive subject as HIV/AIDS. Adult education requires teaching strategies that take into account the individual's life experiences in order to make the teaching process meaningful and to augment the probability that what is being taught will be incorporated. This is one of the aims of socially and culturally sensitive health communication.

Information about HIV/AIDS is generally obtained from the media (TV news and advertisements) and family members, as well as other significant individuals. The participants remarked that the current coverage of HIV/AIDS has helped people to learn about the disease. In addition, they commented that mass media has made the public more aware of HIV/AIDS compared to two decades ago.

Barbara, a woman in her fifties, stated:

- In the past, there was not as much guidance regarding sex as there is now because now it is a topic that is publicly and openly discussed; before, it was taboo. [*Para aquel entonces no había tanta orientación sexual como ahora. Porque ahora es un tema que se habla públicamente y abiertamente y antes era tabú.*]

Some of the women noted that they served as the primary source of HIV/AIDS information for their offspring. Puerto Ricans are more likely than other Latino groups to alter or change health behaviors based on how ill health will affect members of the family. For many Puerto Ricans, the family is the spring from which flows a wealth of traditional, health-related knowledge [18].

Types of Activities and Places—The use of popular culture, such as music and musical activities, was perceived as an appropriate to get (and hold) people's attention. In that vein, participants stated that music could motivate others. Using famous artists—particularly singers—to convey messages about HIV/AIDS was perceived as an effective strategy. Participants also mentioned that they would attend or pay attention to the following:

- Group discussions (in small settings, such as the focus group)
- Home visits
- Lectures
- Health fairs
- Television advertisements
- Messages in shoppers

- Messages as part of a soap opera script
- Songs by local artists

As for locations, the women suggested that they should vary according to the target population. They recommended that the public housing complexes are good places to bring lecturers. They also suggested that schools are the best settings for adolescents, while for pregnant women, the gynecologist's office would be ideal. Three young women who attended the focus group with their small children acknowledged that they received orientation from their gynecologist during their pregnancies.

Source Factors that Influence Communication—It has been suggested that source credibility is the most commonly considered source factor, and that when a person perceives a source to be similar to him or herself, ratings of the source are often more favorable [16]. The women in our focus groups emphasized that lecturers should be persons who could establish rapport with the audience. To elucidate, they mentioned the following characteristics:

1. Credibility:

- “You pay attention... according to the person and what you observe in that person. If a quack comes to speak, you can be assured that I will ignore him”. [*Porque tú haces caso... de acuerdo a la persona y a lo que tú observas en la persona. Si un charlatán viene a hablarme, está por seguro que yo lo ignoro.*]

2. Unpretentiousness:

- “...a person who comes to give a talk shouldn't be pretentious... all dressed up, with a vest, with a briefcase. If you want to reach a community, if you come to a public housing project... Well, they should try to inspire trust and look humble, simple. [They used the focus group moderator and observer as examples of unpretentious persons who dressed according to their audience]... But if you come through that gate with a blazer or all suited up, in a Pierre Cardin or with a Givenchy bag, you know, it's like, ‘hello?’” [*Porque una persona que viene para darte una charla no es para que venga bien encopetáo... Mucho gabán, mucha chalina, mucho maletín. Si tú quieres llegarle a una comunidad, si tú vienes a un residencial,... pues mira, que inspiren confianza y se vean humildes, sencillas. Pero si tú entras por ese portón con un blazer, enchaquetoná, mucha cartera Pierre Cardin o Givenchy... Tú sabes, ¿hello?*”]

3. The ability to listen.

4. Empathy (i.e., community residents or former residents who have overcome the obstacles that public housing residents face):

- “He told us, ‘I’m showing you this image, but I come from public housing just like all of you. And I am here to talk to you about what’s out there,

your problems, what's going on.' And, you know, we felt comfortable.”
[El nos dijo, “yo vengo con esta fachada pero yo vengo también de un residencial público como ustedes.” Yo vengo a hablarle a ustedes de lo que hay, de sus problemas de lo que pasa. Y fíjate, nos sentimos cómodos.]

5. Being HIV-positive:

- “An even better example [of an appropriate speaker] would be a person who has the disease... Who better than them, and their own testimonial?”
[Un mejor ejemplo sería personas contagiadas que tienen la condición. ¿Quién mejor que esas personas, su propio testimonio?]
- “What I mean is that it's easier when I talk about something that really happened to me—because I've lived through it—than something someone tells me or because I read it in a book or watched it on television.” *[Lo que yo quiero decir es que es más fácil cuando yo hablo de algo que me pasó en verdad... porque lo viví, que algo que alguien me contó o porque lo leí en un libro o lo vi en televisión.]*

Specific Strategies and Other Considerations—The participants mentioned certain concerns regarding health communication. They stated that messages should be written in a simple way, using lay terms. They acknowledge that (as a whole) they do not like to read and that, in fact, some female residents cannot read; for this reason, the use of pamphlets and books is not the ideal strategy for reaching them.

Linda advised that printed literature was not the most effective way to reach this particular population:

- They hand out booklets, and when you turn around you throw them in the wastebasket. *[Te dan folletos y cuando das la espalda lo tiras al zafacón.]*

Women's magazines, instead, were perceived as a better way to reach the study participant's than books or pamphlets. In addition, mass media (television, radio) was also considered to be a good health promotion method. Those present in the discussion sessions confided that, on a daily basis, they watched soap operas and variety shows on television and listened to music and other programs on the radio. An additional means of mass communication that the women recognized could be used to educate people on HIV/AIDS was movies. They stated that a movie would help viewers visualize the disease as well as giving them a message they could relate to.

Juanita, Lymarie, and Marisol had this to say about the presumed effectiveness of a movie:

- People can visualize what happens. Because it's one thing is to talk about it and another to live it. One thing is what is written on a paper and another is what you see with your eyes... You can't illustrate on a paper what happens in real life. *[Que se visualice. Porque una cosa es decirlo y otra es vivirlo. Una cosa es lo que dice un papel y otra lo que tú ves con tus ojos... porque en un papel tú no lo puedes ilustrar como en la vida real.]*

- A movie with the initial stage, how you get infected, how the condition develops over time, the medication, the final stage... Because many people talk about HIV and AIDS, but it's one thing to talk about it and another to see it. [*Una película con la etapa inicial, las maneras de adquirirla, cómo se va desarrollando la condición, los medicamentos, la etapa terminal... Porque mucha gente habla de VIH y SIDA pero una cosa es decirlo y otra cos es verlo.*]
- A movie... about the reality that you live... What you go through from wake up until you go to bed. People need to realize that the condition has a variety of needs ranging from medicines to emotional needs to support. [*Una película... que sea una realidad que tú vives... Qué es lo que tú vives desde que te levantas hasta que te acuestas. Que la gente sepa que esa condición tiene una serie de necesidades tanto de medicamentos, como emocional, como de apoyo.*]

A forthright depiction of the disease and a person's deterioration as the stages progress was also suggested as an efficient prevention technique. Cynthia, a focus-group attendee, expressed the following:

- Let them see how the person deteriorates... The scaly skin, the graying of the skin, the hair loss. The megalovirus that eats their organs. Let them see that the person can't sleep from the pain in his/her body... The frustration of the person when s/he cannot hold his/her bodily fluids. [*Que vean cómo se va deteriorando esa persona. La piel escamosa, la piel gris, cómo se le cae el pelo. El citomegalovirus que se lo come por dentro. El ver cuando esa persona no puede dormir por su dolor en el cuerpo. La frustración de la persona cuando no puede retener sus fluidos.*]

Discussion

According to the Puerto Rico Department of Health, HIV incidence in Puerto Rico has decreased for males since 1993; however, female rates have shown no such decline [4]. While past HIV/AIDS campaigns and prevention strategies have focused on educating people about modes of transmission and/or risk behaviors, these results suggest that education itself is not sufficient to promote changes in behavior; additional research has shown that culture plays a role in both the individual's decision-making process and his/her behavior, especially that of gender role and the expectations that go with those roles [19]. The HIV/AIDS epidemic is a serious threat to the Hispanic community, with a number of cultural, socioeconomic, and health-related factors contributing to its spread. Research shows that behavioral risk factors for HIV/AIDS differ by country of birth; data also suggest that Hispanics born in Puerto Rico are more likely than other Hispanics to contract HIV as a result of injection drug use [1, 15]. Hence, we questioned what other factors should be included in prevention/intervention strategies in order to make them appropriate for our target population and promote behavior change. The cultural characteristics of any given group may be directly or indirectly associated with health-related priorities, decisions, and behaviors and/or with the acceptance and adoption of health education and health communication programs and messages. Planning a health communication program includes selecting credible sources, choosing message strategies, and determining optimal settings or channels for the delivery of communications [16]. Latino culture reinforces the idea that

women are expected to behave traditionally in sexual matters. These expectations and values are part of the history of sexual repression of Puerto Rican women [19]. Research suggests that low income couples hold more traditional sexuality values than middle- or upper-income couples [10]. In summary, this is the first study to examine the role of culture on barriers to effective HIV prevention strategies among impoverished women living in public housing in P.R. and indicated some important findings. The results of this study indicate that current HIV/AIDS prevention strategies are inadequate where women of low socioeconomic status living in public housing in P.R. are concerned; the collected data describe other factors that should be included in future prevention strategies.

The results suggest that participants living in the designated public housing complex recognized HIV/AIDS modes of transmission and risk behaviors, as well as their barriers to practicing safe sex. They identified promiscuity, unprotected sex, infidelity, drug and alcohol use, and sharing syringes as behaviors which, if practiced, would place them at risk of HIV/AIDS transmission. Participants' demonstration of adequate knowledge with regards to viable modes of transmission and risk behaviors implies that earlier efforts to educate women about these topics have perhaps been effective.

Interestingly, while these women recognized the behaviors that placed them at risk, the information was not enough to either change their behavior or encourage them to protect themselves or others from the disease. Participants specifically identified lack of negotiating skills, fear of sexual violence, partner refusal to use condoms, and lack of control over their partner's sexual behavior as barriers to practicing safe sex. The identified barriers add to the mounting evidence that cultural and gender-based roles influence women's sexual behavior; even when a woman has accurate information about sex and HIV prevention, societal expectations (that a woman should be naïve) make it difficult for her to be proactive in negotiating safer sex [19]. Puerto Rican women viewed assertive negotiation of sexual behaviors with their partners as incompatible with cultural norms regarding the female role. Furthermore, in Puerto Rico, these ideas are more prevalent among members of low-income populations, which members conform to more traditional values related to gender [10]. This traditional cultural influence is something that must be taken into account when developing HIV prevention interventions targeting women in this population that may not have been specifically targeted in previous research targeting impoverished women living stateside.

Considering that the barriers that the women in our focus groups have identified are related to cultural beliefs that emphasize women's passivity, and considering that these same women are already well-informed regarding basic HIV/AIDS transmission and behavior risks, it is essential to develop prevention programs in which the message is adapted to the target's cultural ideals and goes beyond the attempt to educate in order to encourage behavioral change. A "culturally appropriate" prevention model should consider social and historical factors and present the information in the most accessible, respectful, and understandable manner possible—one that is appropriate for the target population [20]. In addition, HIV-prevention interventions should couple an information campaign with a skill-building component [21].

Studies limited to providing information may be less effective than ones that incorporate education, a skill-building component, and that consider communication factors (i.e., source, message, and recipient). Programs should be implemented in small group discussions and in a place where participants feel comfortable; they should be led by a trustworthy source with whom the participants can identify and given using appropriate language. Language and vocabulary play key roles in health communication; as do cultural beliefs that encompass notions of female and male roles, the importance of family, and health. This is additionally complicated by the cultural and socioeconomic politics of gender relations. The findings that have been reported will contribute to the development in Puerto Rico of additional HIV/AIDS studies from a social perspective.

There were some limitations to the study, primary among them the small number of participants. While the public housing complex was chosen for convenience and size, the results cannot be generalized to all women living in public housing complexes in the Ponce region. Also, it is important to note that the complex that was chosen is one of the most targeted living complexes in Ponce. Because of its size, many private and government agencies visit this specific complex in order to give lectures and provide HIV/AIDS counseling. Hence, women living in this complex might be more informed than the average woman living in a smaller public housing complex.

The results obtained from this study indicate the advisability of implementing future studies directed at determining the cultural barriers that impoverished Puerto Rican women encounter to the practice of safe sex. Recognizing these barriers will allow for the development of effective and culturally appropriate prevention intervention programs at community levels. Future research should be undertaken to evaluate other social and cultural factors that increase the risk of HIV/AIDS transmission in this population.

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Appendix

1. What do you know about HIV/AIDS? [*¿Qué ustedes saben sobre el VIH/SIDA (Virus de Inmunodeficiencia Humana)?*]
 - a. What is HIV? [*¿Qué es VIH?*]
 - b. What is AIDS? [*¿Qué es SIDA?*]
2. In your understanding, what are some of the practices and/or risk behaviors that can lead to the acquisition of HIV, AIDS, or other sexually transmitted diseases? [*¿Cuáles entienden ustedes que son algunas prácticas o comportamientos (conductas de riesgo) para adquirir el VIH, SIDA u otras enfermedades de transmisión sexual?*]

3. What alternatives do you think that women have to decrease the risk of becoming infected with HIV/AIDS? [*¿Qué alternativas ustedes piensan que tenemos las mujeres para reducir el riesgo de adquirir VIH/SIDA?*]
4. What ways do you have of reducing the risk of becoming infected with HIV/AIDS or in which ways would you reduce other women's risk of being infected with HIV/AIDS? [*¿Qué maneras tienen ustedes de reducir el riesgo de contraer VIH/SIDA o de qué maneras reducirían ustedes el riesgo de otras mujeres de contraer VIH/SIDA?*]
5. If you were told that you had a sexually transmitted disease or HIV, What would be your sources of support? Who would help you? [*Si les dijeran que tienen una Enfermedad de Transmisión Sexual o VIH ¿cuáles serían sus fuentes de apoyo? ¿Quiénes las ayudarían?*]
6. Do you have anything else to add to what has been discussed today? [*¿Tienen algo más que añadir a los que hemos discutido?*]

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Table 1Sample Characteristics of Focus Group Respondents ($N = 39$)

Characteristic	%
Age (Years)	
21–29	25.7
30–39	17.9
40–49	33.3
50–59	15.4
60–69	5.1
Unknown	2.6
Education (Grade completed)	
1–6	17.9
7–9	33.3
10–11	15.4
12	28.2
Technical, vocational, or associate degree	5.1
Marital status	
Single	46.2
Married/Common-law	46.2
Divorced	2.6
Widowed	5.1
Number of children	
0	7.7
1–3	56.3
4–6	30.9
7 or more	5.2
Employment status	
Employed	5.2
Unemployed	94.8
Know someone who died of AIDS	
Yes	74.2
No	25.8
Know person infected with HIV/AIDS	
Yes	69.2
No	30.8