

Sexual practices, knowledge and perception of risks about STDs in a group of Puerto Rican Baby Boomers who are injection drug users

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Abstract

Empirical evidence shows that the high prevalence of HIV risky behavior among Puerto Rican injection drug users (IDUs) continues. Little research attention has been devoted to Baby Boomers that are drug users and have engaged in riskier behaviors than previous cohorts. The present study explored sexual behavior, knowledge of sexually transmitted diseases (STDs), and sex negotiation among Puerto Rican Baby Boomers who are IDUs. Data was gathered in 2007 from 50 IDUs using a questionnaire that covered sexual behavior, knowledge of STDs, and sex negotiation. Participants practiced unprotected oral (73.3%), vaginal (69%), and anal (39.3%) sex in the 6 months prior to the interview. Corroborating results of previous studies, a persistent risky behavior among the participants in this study was found despite their knowledge of its consequences. Revision of public policies and plans of action for health promotion and protection as well as social environments and individual risk factors are needed to enhance discontinuation of unhealthy life styles.

Keywords: Baby Boomers – IDUs - Sexual risk behavior - Condom use - Knowledge of STDs - Puerto Rico.

Prácticas sexuales, conocimiento y percepción de los riesgos de las ETS en un grupo de puertorriqueños Baby Boomers que son usuarios de drogas inyectables Resumen

La evidencia empírica muestra que continúa habiendo una alta prevalencia de comportamientos de riesgo relacionados con VIH entre puertorriqueños que son usuarios de drogas inyectables (UDI). Se ha dedicado poca atención a la investigación de los Baby Boomers que son usuarios de drogas, quienes han mostrado comportamientos más arriesgados que cohortes anteriores. El presente estudio exploró la conducta sexual, el conocimiento de las enfermedades de transmisión sexual (ETS) y la negociación referida al sexo seguro en un grupo de puertorriqueños Baby Boomers que son usuarios de drogas inyectables. Los datos fueron recopilados en 2007 de 50 UDI, con preguntas sobre el comportamiento sexual, el conocimiento de las enfermedades de transmisión sexual y la negociación sobre el sexo. Los participantes practicaron sexo oral (73,3%), vaginal (69%), y anal (39,3%) sin protección en los 6 meses previos a la entrevista. Corroborando resultados de estudios previos, se encontraron comportamientos de riesgo persistentes entre los participantes de este estudio a pesar del conocimiento de sus consecuencias. La revisión de las políticas y planes de acción para la promoción y protección de la salud así como la de los entornos sociales y factores de riesgo individuales es necesaria para alentar la discontinuación de estilos de vida poco saludables.

Palabras claves: Baby Boomers – UDI - Comportamiento sexual riesgoso - Uso del condón - Conocimiento de las ETS - Puerto Rico.

Introduction

Unprotected sex, exchanging sex for drugs or money, having multiple sex partners (eg. Deren et al., 2003; Yao et al., 2008; Yeon-Kang et al., 2005) and having ever had sex with someone who has had a risky behavior or sexually transmitted disease, have been identified as high-risk sexual behaviors (Center for Disease Control [CDC], 2009; Yang & Li, 2005). Such behavior has been correlated with the use of illicit drugs, needle exchange and increased risk of contracting HIV/AIDS (e.g. Estrada, 1998). Additionally, socio-demographic characteristics such as marital status and gender have shown elsewhere a risk factor for adequate knowledge and prevention practices for HIV/AIDS (Baidoobonso, Bauer, Speechley & Lawson, 2013;

Mohamed & Mahfouz, 2013; Yip et al., 2013). For instance, being male and married among a sample of Sudan's population increased risk of HIV contagion (Mohamed & Mahfouz, 2013). Conversely, Wang et al. (2013) posed that in a sample of Chinese, being married is associated with lower risks of contagion; while being female increases it. In the other hand, Yip et al. (2013), indicates that male have higher knowledge, but take higher sexual risk behaviors without those differences being significant.

Other authors have also posed the huge impact of socio-demographic characteristics as risk factors for condom use, behaviors and perception of risk (Sohn & Cho, 2012; Tran, et al., 2013). Indeed, the lack of understanding of how socio-demographic characteristics impact on HIV transmission had

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increased health inequities. The gaps between the impact of socio-demographics characteristics on HIV knowledge and sexual risk practices, when referring to Caribbean populations either living in their homeland or elsewhere, are disproportionately affecting health status (Baidooobonso, Bauer, Speechley, Lawson, BLACCH Study Team, 2014; Baidooobonso, Bauer, Speechley, & Lawson, 2013). For instance, several authors had remarked how socio-demographic characteristics, knowledge and sex-related risk behaviors of Puerto Ricans' islanders injecting drug users (IDUs) differ from other IDUs and Puerto Ricans IDUs living in continental USA and how it impacts on their HIV status and risk of transmission (Colón et al., 2006; Deren et al., 2003; Deren, Kang, Colón, & Robles, 2007).

Nevertheless, the few statistics documented are extremely unreliable on how socio-demographics characteristics impact HIV's transmission and knowledge. According to the 2012 CDC report, in 2010 there were 1,416 new reported cases of HIV and AIDS in the USA attributed to Puerto Rico islanders (Organización de las Naciones Unidas SIDA [ONUSIDA], n.d). This means that approximately 15% of the new cases in the USA are from people born in Puerto Rico. Data from the CDC (2009) also suggests that health behaviors of those Hispanics/Latinos born in Puerto Rico increase their vulnerability to contract HIV. Indeed, Puerto Rican drug users have been identified as high risk population for HIV transmission, both through injection and sex-related risk behaviors (Oliver-Velez et al., 2003). According to estimates, 50% of new HIV infections in Puerto Rico are the result of injection drug use (ONUSIDA, nd; Rossi, 2009). Additionally, empirical evidence shows that high prevalence of HIV risk behaviors among Puerto Rican IDUs continues (Reyes et al., 2007).

Arce-Morales et al. (2013) published the results of two prospective cohorts of injecting drug users (IDU's) participating in a syringe exchange program. The study revealed that the cohort of those of 65 years and older, had a lower probability of transmission of HIV at week 43 compared to other age groups at the island. However, the same study also showed differences in survival times according to sex, geographical location of the shooting galleries, and the amount of years they have been injecting. Arndt et al., (2011) have also predicted a boost prevalence of substance abuse problems among older adults. Estimates reveal that the number of adults aged 50 and over in need of substance abuse treatment will increase to almost 3 million by the year of 2020 (Gfroerer, Penne, Pemberton & Folsom, 2003). This prediction is based on the fact that Baby Boomers have engaged in riskier sexual behaviors and have also experimented more with substances compared to previous cohorts (Arndt et al., 2011; Zablocki et al., 1988). As a consequence, probably there will be larger numbers of current drug users reaching the age of 65 with higher levels of vulnerability to HIV due to riskier behaviors.

To date much of the research on Puerto Rican

injecting drug users and sexual risk behaviors have not been age or cohort specific (e.g. Colón et al., 1993; Deren et al., 2007; Reyes et al., 2007; Robles et al., 1994, 2003; Yeon Kang et al, 2005). Specifically, studies on Baby Boomers and their particularities, such as their sexual and drug history, is scarce. Thus, the present study explores knowledge of HIV and other sexually transmitted diseases (STDs), sexual practices, sex negotiation and attitudes towards condom use among Puerto Rican Baby Boomers who are injecting drug users (IDUs). Additionally, their relationship with individual risk factors (e.g., gender, education level, marital status, progeny, and work status) are explored.

Empirical evidence from previous studies show differences in knowledge and risky sexual behaviors based on gender, marital status, educational status, employment and family composition. Thus, this work aims to identify the socio-demographic characteristics more likely to be associated with the gaps of knowledge in a sample of Puerto Ricans Baby Boomers.

Methods

Participants

A total of 50 people who complied with the inclusion criteria were identified and accepted to participate in the study. 50% of the participants were male and 50% were female, with a mean age of 46 years [47 years for males and 45 years for females]. For this study, participants were recruited from three sites pertaining to a non-profit community-based organization which offers detox services and has a syringe exchange program (SEP). A random number table was used to select a number (n) from one to nine. The selected person was approached every nth person to determine study eligibility. All adults were eligible if were: (a) able to speak and read Spanish or English; and (b) active injection drug users for six months or more prior to the time of interview and were participating in the SEP. Also, all participants needed to have been born between 1946 and 1964.

Materials

Questionnaire

A questionnaire was designed to elicit information related to HIV/AIDS and STDs knowledge, sexual behaviors and attitudes toward condom use. The items that comprised the instrument were obtained from a variety of sources and slightly modified to be culturally relevant. No standard scale was used for this study.

Sociodemographic variables explored included: Age (continuous variable), gender (male/female), educational level (less than high school/more than high school), marital status (married, civil union, separated, widowed or divorced and never married). Information pertaining to drug and alcohol practices and patterns, health care utilization, health status and social support in

the six months prior to the interview was also collected.

Behavioral items were adapted from a modified version of Kann's Youth Risk Behavior Survey (Kelly et al., 2004; YRBS, 2001). The items related to HIV/AIDS and STDs knowledge and transmission were adapted from the scale developed by Kelly and colleagues (2004). The items related to sexual practices and safe sex negotiation were adapted from a validated questionnaire for Puerto Rican islander women at HIV high-risk (Galarza-Ramírez, Serrano-García & Cruz-González, 2000) and from the work published by Kordoutis, Loumakou, & Sarafidou (2000); and those items related to condom use were adapted from the Attitude toward Condom Scale (Brown, 1984). These items (11 corresponding to sexual practices and 10 items to attitudes) were added to build the scale. The higher the number of points within the scale the riskier the practices and the better the attitudes.

Procedure

The interviewer explained the study objectives, inclusion and exclusion criteria and confidentiality procedures to assure that all participants complied with the study requirements. Once screening was done, informed consents were obtained as required by the Institutional Review Board of the University of Puerto Rico Protocol #6570104. Thereafter, the formal interview took place. Unique alpha numeric codes were constructed for each participant based on the site of interview and the numbers ranging from 001 to 050.

Completion of the face-to-face interviews ranged from 45 minutes to 90 minutes. Participants were compensated with U\$D 10 voucher for participating in the interview. After assuring data was complete in the questionnaire, analysis was performed using SPSS version 19. Frequency distributions were computed for continuous and categorical variables. Pearson correlation analysis was used for computing relations among variables. A p of 0.10 was considered to indicate a statistical significance due to the small sample size. Only results showing associations statistically significant were reported.

Results

Socio-demographic characteristics

In terms of educational attainment, 40.0% had more than high school; 36.0% had a high school diploma; and 24.0% had not reached high school level. When asked about their marital status, 32.0% were divorced; 28.0% were married and/or civil union; 20.0% were single, 16.0% were separated and 4.0% had never been married. Also, 84.0% had children, and of those who had children, 68.2% have 2 or more and 31.8% have one child. Employment status was measured by the following question: At present, are you employed? 66.0% reported that they were not working. From the 34.0% that answered affirmatively to the question:

41.2% reported having a full time job; 17.6% being working on part-time bases; and 41.2% reported having an "informal" job sometimes.

Drug use history

Questions related to the participants' drug use history showed that 91% of participants were currently using street drugs and prescribed drugs prior to entering treatment. The most common drugs used were cannabis (65.8%), crack (60.5%), cocaine (56.4%), heroine (53.8%) and speedball (48.6%). Over 60% initiated with marihuana, and 58% mix their drug with horse anesthesia. 61% share needles and 74% share their cooker with others.

90% of the participants started using street drugs at 15 years old and had being using drugs for more than 20 years. Starting age of injecting drugs also shows a similar pattern among participants (15 years old or more). Needle usage varied from 9 to 10 per day, within an injecting pattern from 5 to 7 times per day.

Knowledge of STDs and HIV

Most of the sample had an adequate knowledge of STDs and HIV, although 74% indicated a high level of concern of contracting a sexually transmitted disease. Similarly, one third of the sample (30%) demonstrated lack of or gaps in their knowledge on this topic. For instance, 28% believe that being married protects them from infection. Bivariate analysis showed that those who had no children were more likely to accept this as fact ($X^2_{(GL=1)} = 3.70, p = .05$).

Likewise, 26% of the sample still believes in some of the myths of HIV transmission (e.g. HIV can be transmitted through mosquito bites). At bivariate level, the only social characteristic related to this myth was marital status: particularly, those not married participants were more likely to report this belief in comparison to those married or living with a lover ($X^2_{(GL=2)} = 9.60, p = .008$). Finally, almost 40% are unaware that in Puerto Rico, women are the group that has experienced, in recent years, the highest number of HIV cases. Significant associations were found among males and lack of knowledge of this fact ($X^2_{(GL=1)} = 4.15, p = .04$) (Refer to table 1).y

Table 1. HIV Knowledge among Baby Boomers who are IDUs
N=50

	Percent Distribution (%)	
	Yes	No
In Puerto Rico women are the segment with more cases of AIDS	38	62 **
HIV can be transmitted through a mosquito bite	26	74 *
Being married protects you from acquiring HIV	28	72 *

* ¶ Significant result by marital status at a p value < 0.10

** § Significant result by gender at a p value < 0.10

Sexual risk behavior and practices and safe sex negotiation

58% percent of the sample informed having sexual partners six months prior to the interview. Of those who had partners, 48% indicated having one sexual partner; 24% informed having two sexual partners, and, approximately 28% had three or more sexual partners. At bivariate level, men are more likely than women to have only one sexual partner ($X^2_{(GL=1)} = 5.7, p = .05$). No other significant differences between sexual risky behaviors and socio-demographic characteristics of participants were identified.

However, it should be noted that in the last six months prior to interview, 73.3% of the participants practiced oral sex without condoms; 39.3% had anal sex without condoms and 69% reported to have vaginal sex without condoms. Indeed, 66.7% of the participants had not used a condom the last time they had sexual intercourse and 76.7% had oral sex without protection. When the data was analyzed using bivariate analysis, it was found that those separated, divorced and/or widowed were more likely to not use a condom while having vaginal intercourse in comparison to those

married or living with a partner ($X^2_{(GL=2)} = 10.31, p = .006$). None of the other participant's socio-demographic characteristics were statistical significant to any of the behaviors mentioned above.

Twenty six percent of the participants presented a negative attitude toward safe sex negotiation. A 54.0% percent did not prefer to use a condom during sex intercourse. The main reasons not to use a condom were: (a) it reduces pleasure (47.4%); and (b) difficulties asking their sexual partner about their sexual (46.7%) or drug use history (35.6%). A 64.0% of participants indicated that it is not right for the women to bring the condom at the sexual encounter. Gender differences were observed at bivariate level. Being a male was associated with negative attitudes toward: (a) condom use ($X^2_{(GL=1)} = 3.53, p = .055$), (b) asking their sexual partners about drug use history ($X^2_{(GL=1)} = 4.24, p = .055$), and (c) women bringing condoms at the sexual encounter ($X^2_{(GL=1)} = 3.69, p = .093$). Conversely, bivariate analysis showed that those participants that had not reached high school level had a positive attitude towards women bringing condoms at the sexual encounter ($X^2_{(GL=1)} = 3.69, p = .09$) (Refer to table 2).

Table 2. Safe Sex Attitudes among Baby Boomers who are IDUs
N=50

	Percent Distribution (%)		
	Yes	No	Don't Know
I Like using a condom during sexual intercourse.	43.5	54.3 **	2.2
I Have problems asking my partner or client about their past drug use	31.1	64.4 **	4.4
It is all right that the woman is the one who brings a condom to their sexual partner	71.4 * **	24.5	4.1

* ¶ Significant result by educational level at a p value < 0.10

** § Significant result by gender at a p value < 0.10

Discussion

This study aimed to identify which socio-demographic characteristics were more likely to be associated to the gaps in HIV literacy and sexual behavior among a sample of Puerto Ricans Baby Boomers living in the island. This research found that most participants had adequate HIV knowledge; however, gaps in this knowledge were significantly associated with sex and marital status and were not related with their educational status, employment or family composition.

It should be noted that the HIV/AIDS epidemic has been documented for more than thirty years and, since then, many initiatives had been taken to fight the high prevalence in the communities in the island. Most of them had been associated with an increase of knowledge among the most vulnerable populations.

Marital status of the sample under study showed association with a false perception of being protected against HIV, mosquito transmission routes, and the use of condom while having vaginal penetration. Our results are consistent with other studies that show that those who were married had poorer knowledge in comparison with those not married (Baidoobonso, et al., 2014; Baidoobonso, et al., 2013; Mohamed & Mahfouz, 2013; Wang et al., 2014, Yip et al., 2013). It can be argued that married Puerto Rican men perceived less risk based in a higher condom use and a perception of fidelity of their sexual partners. This perception had also been documented by several authors (Chikovani, 2011; Gyarmathy et al., 2005; Lau et al., 2009; Yao et al., 2008)

On the other hand, the population under study had longer surviving rates for HIV infection than younger ones, as stated by Arce-Morales et al. (2013). It could be posed that they might have rejected the “consumer culture”. This culture is characterized by the definition pleasure-desire as immediate gratification, as a result of witnessing the high mortality rates attributed to the epidemic (Albertín-Cabó, Domingo-Salvany, & Hartnoll, 2001).

No empirical evidence was found to explain the beliefs of HIV transmission through mosquitoes' bites. Suggestions had been made to the Community-based Organizations (CBO) to update this data among participants and to explore this belief qualitatively. Nevertheless, this item is an example that points out that more exhaustive work needs to be done in the field of HIV/AIDS and in the area of education and prevention in vulnerable populations.

Regarding the risky sexual behaviors, it had been indicated that knowledge is not enough to change behaviors, particularly when drug use precedes sexual activity (Zagumny & Ray Holt, 1999). Therefore, a plausible explanation of the dissonance between high knowledge and, at the same time, high risk sexual behavior shown by the participants of our sample could be attributed to the loss of power or self-control as a result of their drug dependence (Albertín-Cabó, Domingo-Salvany & Hartnoll, 2001); or their belief in

the myth of invulnerability (Cunningham & Ramos Bellido, 1991), that HIV/AIDS is an illness of “others” (more vulnerable groups such as homosexuals). Yip et al. (2013) has also documented similar results among adults, pointing out that those not married tend to adopt riskier sexual practices than those married.

It would be adequate to also consider anthropological explanations that could be related to the knowledge of HIV/AIDS in this sub-group under study. Individuals' actions and beliefs are taught and shaped by social influence framed within a specific culture (Cunningham & Rodríguez, 1991; Yeon-Kang et al., 2005). The Latino culture is very likely to increase health disparities due to gender as documented by Loue and Sajatovic (2006). Thus, the significant associations observed in the risky behaviors could be highly attributed to cultural norms adopted by Latinas. Women among the Latino population are more likely to be responsible for the popular education and health status of their families. This could help explaining why higher percentage of women knew that women were at higher risk of infection.

Attitudes towards condom use might also be explained by the physical discomfort previously documented by other males in the Mizuno et al. (2007) study. Reyes et al. (2007) had also pose that for some males condoms bring a sense of interference with erection or lubrication, as a result of a high level of anxiety that provokes sexual dysfunction. The macho culture documented by Loue and Sajatovic (2006) among Latinos can also explain the negative attitudes found when women brought condoms to the sexual encounters, as well as, why males were more likely than women to ask their partners about their drug history. Macho Latino culture expects women to be submissive and to conserve the “virgin-innocent” status at all times independently from other circumstances and even more if the Macho is thought to be at a higher educational level than the women.

Before any generalizations and suggestions could be made from the results obtained in this study, some limitations need to be discussed. First, as the Baby Boomers volunteered to participate, the results of the study might not be representative of all islander IDUs, self-selection bias may have occurred. A second limitation was that information was obtained from a small sample which hindered the authors' ability to test multiple interactions or attribute causality to the results. Another plausible limitation is that the use of face-to-face interviews and self-reports might present social desirability bias. A third limitation of the present study was that findings did not explore the differences within differentiation by variables within the economic, social and emotional context, and causation of drug injection and its consequences. Additionally, no data among IDU Baby Boomers was found for comparisons, as the authors understand this is the first article documenting it. Nonetheless, data from the face-to-face interviews provided a promising starting point to develop sexual risk reduction interventions for Baby Boomers who are

IDUs. Limitations intrinsic to the epidemiological design are also found, as a cross-sectional study can't prove causality.

Several implications of our investigation are in order. Contrary to common belief, HIV and AIDS are prevalent in the older adult population (Levy-Dweck, 2005) and Baby Boomers have engaged in riskier behaviors. Further research on Puerto Rican Baby Boomers who are IDUs is needed to draw up future plans and public health policies in order to result in effective and stronger prevention strategies. This will lead to sexual behavior modifications, as has been stated by others (Semaan et al., 2003). This strategies should give particular attention to cultural imperatives (Des Jarlais & Semaan, 2005); subcultural evolution of the illicit drug use (Golub, Johnson & Dunlap, 2005); how

this cohort responds to intervention efforts (Kwiatkowski, & Booth (2003); and emphasize on IDUs counseling in order to modify sexual behaviors instead of focusing on modifying their injecting behaviors. Social and physical environments should be considered when planning structural prevention strategies and health programs (CDC, 2010; WHO, 2009), both at an individual level to help reduce individual risky behavior, and at a community level, to enhance changes in cultural values, attitudes, and areas of behavior related to the construction of sexuality (Cunningham & Rodríguez Sánchez, 1991), in order to offer appropriate health interventions that may promote healthy lifestyles and empower this segment of the Puerto Rican population.

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