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A Framework for Sexual Decision-Making Among Female Sex Workers in Jamaica

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Abstract The Jamaican government has provided targeted HIV and sexually transmitted infection prevention, treatment, and other services for female sex workers (FSW) since 1989. HIV prevalence among FSW declined from 20 to 12 % between 1989 and 1994, then to 9 % in 2005, 5 % in 2008, and 4.1 % in 2011. This article distills the literature and two decades of experience working with FSW in Jamaica. Drawing on the constant comparative method, we put forward an innovative conceptual framework for explaining sexual decision-making and risk behaviors within both transactional and relational sexual situations. This framework helps fill the gaps in existing models that focus on individual behaviors. The model identifies interactions between environmental and structural elements of sex work, and three individual-level factors: risk perception, perceived relationship intimacy, and perceived control, as the four primary mediating factors influencing sexual decision-making among FSW. We propose that other factors such as violence, socioeconomic vulnerability, and policy/legal frameworks influence sexual decision-making through these primary mediating factors. This conceptual model may offer a useful framework for planning and evaluating prevention interventions among sex workers. However, it remains to be tested in order to establish its value.

Keywords Female sex workers · Sexual decision-making · AIDS · HIV · Jamaica

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Introduction

The HIV epidemic in Jamaica and the Caribbean has features of both a generalized as well as a concentrated epidemic (Figueroa, 2014; UNAIDS, 2009a, 2009b). HIV prevalence has been significantly higher among sex workers than the general population and highest among men who have sex with men (MSM) (Figueroa, 2014; Figueroa et al., 2008). In Jamaica, HIV prevalence among female sex workers (FSW) has declined from 20 % in 1989 and 12 % in 1994, to 9 % in 2005, 5 % in 2008 and 4.1 % in 2011 (Figueroa et al., 1998, 2008; Jamaica Ministry of Health, 2006, 2010, 2007). This downward trend has resulted from a combination of prevention approaches which are described later in the article. Although sex work ("prostitution" and "soliciting") is illegal in Jamaica, the government takes a laissez-faire attitude towards commercial sex and supports the national HIV programme. The national program includes outreach HIV testing and counselling at sex sites, educational activities, condom distribution, training workshops and access to sexually transmitted infection (STI) and HIV treatment and social services.

A review of research published on sex work over the last 20 years reveals a combination of epidemiological, behavioral and structural strategies to reduce HIV risk among sex workers, their clients and other sex partners. Varga (1997), Venkataramana and Sarada (2001), and Hong and Li (2009) describe the use of awareness building interventions among sex workers that are based on the health belief model that is focused on assessing choices that result from perceived HIV risk and vulnerability. Individual-level constructs of risk perception and partner intimacy have also been addressed through social learning approaches and the diffusion of innovation strategy in peer-to-peer interventions in South India and Amsterdam (Van Haastrecht et al., 1993; World Health Organization, 2003). A structural approach in Thailand requiring 100 % condom use in brothels was carried out and achieved considerable success (Van

Griensven, Limanonda, Ngaokeow, & Ayuthaya, 1998), while the Sonagachi model described as sustainable by Jana, Basu, Rotheram-Borus, and Newman (2004) that applied a combination of community-level, structural and individual approaches in Calcutta, India. These approaches also involved strategies to make condoms available and affordable to sex workers and clients. These frameworks and strategies help explain the changes that were found in HIV-related sexual behavior among sex workers and their clients.

This article seeks to develop a conceptual framework for sexual decision-making among FSW based on our cumulative experience of working to promote safer sex among sex workers in Jamaica over the past 25 years and an examination of the sex work and behavior change literature. We begin with a literature review focused on sex work in the Caribbean and move to coverage of HIV prevention interventions in Jamaica. Finally, we describe the methodology we used to develop our conceptual framework and our findings and recommendations.

Sex Work in the Caribbean

The socioeconomic drivers of sex work in the Caribbean and specifically Jamaica have been described by other scholars. Henriques (1963) found that during slavery, post-emancipation and the early 20th century, sex work provided women an opportunity to improve their lot through sexual liaisons with white men or, post-emancipation, to earn an income in declining socioeconomic conditions. Sex work provided an alternative income in the harsh economic climate created by structural adjustment policies in the 1970s and 1980s (Moser & Holland, 1997; Ross-Frankson, 1987). Kempadoo as well as Boxill describe how a fast-growing tourism sector and limited economic opportunities have facilitated an increase in female and male prostitution in the region (Boxill, Taylor, & Maerk, 2003; Kempadoo, 1999). Commercial sex in most Caribbean countries including Jamaica is readily available and unregulated (Pan Caribbean Partnership against HIV and AIDS (PANCAP), 2009). In the past two decades, changes in community norms and societal attitudes towards transactional sex along with a growing internal demand for sex work, high unemployment and a high school drop-out rate due to teen pregnancies led to a burgeoning of the sex trade in almost all urban centers (Chambers & Chevannes, 1994; Eldemire-Shearer & Bailey, 2008; Figueroa et al., 2008). The national Knowledge Attitude Practice and Behavior (KAPB) survey of 2008 found that 6 % of Jamaican men aged 15–24 years and 8 % of those aged 25–49 reported having sex with a sex worker in the last 12 months (Hope Enterprises Ltd, 2008). The KAPB surveys of 2008 and 2012 found that 52.7 and 53.8 %, respectively, of Jamaican men reported having transactional sex in the last 12 months (Hope Caribbean Company Ltd, 2012). Transactional sex is defined as a relationship that involves the exchange of money or material goods for sex (Leclerc-Madlala, 2003; Norris, Kitali, & Worby, 2009). In many instances, the boundary between transactional sex and sex work are blurred (Harcourt & Donovan, 2005; PANCAP, 2009). Sources of HIV/STI risk and vulnerability to FSW and their male clients in the Caribbean include relationship dynamics, violence, alcohol, drug use and modes of operation including coercion and trafficking (Surratt, 2007; Panos Institute, 2000; Kempadoo, 2007; Murray et al., 2007). Caribbean sex industries are often associated with the use of alcohol and drugs by sex workers and their clients which the literature consistently offers as a threat to condom use (Eldemire-Shearer & Bailey, 2008; Heemskerk & Uiterloo, 2009; Surratt, 2007). These risk factors are complex and dynamic and can be viewed from multiple perspectives. A survey by Alegria et al. (1994) among 127 Puerto Rican FSW identified the need to examine their psychological conditions in order to tailor risk reduction strategies for them. Both Allen et al. (2006) and Kerrigan et al. (2003) allude to heightened risk of sex workers in Guyana and the Dominican Republic due to socioeconomic vulnerability in spite of providing STI services as well as behavior change/social marketing interventions aimed at increasing condom use. Much of the documented research and interventions aimed at HIV risk reduction among sex workers, and other high-risk groups in the Caribbean have focused on condom use and risky behavior such as the number of unprotected sexual partners (Kerrigan et al., 2003; Murray et al., 2007). These studies, like those from the rest of the world, show that the greatest success of these interventions has been in the area of increased condom use, though consistent condom use remains a challenge (Duncan et al., 2010; Wingood & Di Clemente, 1996). Some studies have concentrated on personal variables such as attitudes, perceived social norms, behavioral intentions, and perceived self-efficacy as predictors of appropriate prevention behaviors (Bombereau & Allen, 2008; Hansen, Lopez-Iftikhar & Alegría, 2002; McEvoy, 2001).

Although these interventions and studies have enhanced our understanding of how individual differences have an effect on general patterns of risky behavior, they leave theoretical gaps in understanding sexually risky behavior within particular situations and the processes through which sexual decision-making and condom negotiation occur. They overlook important psychological states, such as poor self-esteem, victim and/or risk taking personalities that also affect the ways in which decisions are made. They also generally fail to address structural and environmental issues that influence sexual decision-making.

Interventions with Sex Workers in Jamaica

Beginning in 1989, HIV prevention programmes for FSW in Jamaica employed individual, environmental and structural approaches delivered through the Ministry of Health and its non-governmental partners (Figueroa et al., 2008). These interventions included peer education, condom distribution, training in condom use and condom negotiation skills, drop in

centers and workshops that offered STI treatment and HIV testing, as well as interventions addressing social vulnerability (Hope Enterprises, 1993). Various theoretical frameworks to guide these interventions were applied over the two decades. The diffusion of innovation strategy was used in a peer-to-peer approach in an attempt to change the social norms among the population. Sex workers were recruited and trained as peer educators. These educators distributed condoms, built self-efficacy for condom use with clients and for seeking HIV testing and STI treatment among their peers.

A supportive environment for enabling FSW to acquire, carry and use condoms was created through building alliances with the managers and operators of the sex work sites (mostly bars, clubs and brothels). Health staff were allowed to conduct HIV and STI education and testing at the sites with the sex workers and other staff such as barmaids, disc jockeys and security staff as well as patrons. The owner/managers were persuaded to encourage safer sex and health-seeking behaviors among the FSW and their patrons including having condoms available for sale in their establishments. These efforts ran concurrent to the national condom social marketing campaign, which targeted the sexually active adult population including the clients of sex workers. Free drop in centres that offered HIV and STI testing and treatment alongside educational and personal development sessions were established in the two main urban centres of Kingston and Montego-Bay. These centres operated outside of the regular hours of the public health facilities. Sex workers who solicit from the streets are vulnerable (Hope Enterprises, 2005), as they tend to be less educated, older, more likely to be using crack cocaine and less able to demand high prices. They did not benefit as much from this supportive environment. They were also targeted by the police who frequently arrested them for soliciting until the HIV prevention leadership brokered an agreement for tolerance for sex work among the leadership of the police.

Social vulnerability and risk was addressed in the early 1990s by offering skills training and alternate employment to sex workers through civil society and private sector collaboration. This strategy generally failed as opportunities for employment remained scarce and the levels of remuneration and conditions of work were unattractive. By 1996, the adoption of 80 % condom use with commercial partners had been achieved among sex workers in Jamaica through the use of diffusion of innovation approaches to peer education and the social marketing of condoms (Figueroa et al., 1998; Hope Enterprises, 2005). With the additional resources acquired through the Global Fund for AIDS, tuberculosis and malaria HIV prevention strategies and activities for vulnerable groups expanded significantly including outreach and site-based HIV testing (Figueroa et al., 2008). The social vulnerability aspect of the sex workers's intervention was expanded to include measures to help sex workers get official documents such as birth certificates and identification cards so that they could access the limited social safety net measures available in Jamaica. A more broad-based multi-sectoral approach was also included in the sex work interventions; the adult literacy agency, the national training institution and micro-financing organizations were engaged to assist FSW to improve their literacy, open bank accounts, save and undergo training to improve their ability to gain employment and establish small businesses in order to provide a second source of income.

In Jamaica, the Kingston Priorities for Local AIDS Control Efforts (PLACE) HIV prevention intervention at sites where people meet new sex partners (Weir et al., 2008) used a multilevel strategy at the site level, the group level among people socializing at sites and the individual level through one-on-one outreach efforts. This randomized control trial showed no evidence of an intervention effect at follow-up 6–12 months later probably due to the difficulty in implementing the intervention, the extent of patron mixing among sites and the intensity of national education campaigns (Figueroa et al., 2010). The introduction of the PLACE HIV Prevention intervention was the most important and explicit use of a theoretical framework in Jamaica. This approach is based on the proximate determinants framework (Boerma & Weir, 2005) and targeted sites where the risk of HIV was greatest such as sex worker's street sites, nightclubs and bars. The intervention applied measures at the environmental, group and individual levels (Figueroa et al., 2010). The group and individual-level strategies included outreach HIV testing and innovative interactive activities to engage persons in risk assessment, improving condom use and negotiation skills including doing condom demonstrations and promoting self-efficacy and risk reduction. The environmental aspect involved advocating for condom use policies at the sites, training of staff and patrons as peer educators, condom social marketing, prominent display of cues to action such as "how to use a condom" and risk assessment posters and brochures as well as "condoms sold here" signs.

Significant human and financial resources have been expended in targeted interventions for FSW in Jamaica. While these have resulted in solid achievements including a significant decline in HIV prevalence, sex workers in certain settings and the clients of sex workers have not been reached as effectively. These interventions have also been less effective in addressing consistent condom use with non-paying partners and regular customers, drug dependency and interpersonal violence. Important structural barriers remain, including outdated legislation and lack of regulatory policies. There is also a need to address the social determinants that create risk for sex workers given the pull of increased demand for sex work.

Method

So as to better understand the elements of sexual decision-making and their impact on safer sex practices among FSW, we examined the drivers of risk reported in the literature on sex work in the Caribbean and internationally, and compared these with insights gained from our cumulative experience of interacting with FSW in HIV prevention interventions in Jamaica over the past 25 years. The three-phase process illustrated in Fig. 1 involved the use of the constant comparative technique, which for researchers in the field helps uncover patterns based on professional experience and allows us to contrast this with the existing research (Babbie, 2007).

The process employed for developing a conceptual framework for sexual decision-making among FSW was largely inductive. Discussions and member checking with sex workers were used to verify the validity of the authors' observations in order to reduce bias. Validity is concerned with the accuracy of findings established through the sex workers' endorsement of the observations thus making them more credible (Stephen, Schensul, & Le Compte, 1999).

In Phase 1, we reviewed over 40 published and unpublished papers and reports on sex work in Jamaica and other Caribbean territories as well as the international literature. Factors associated with HIV risk and sexual decision-making in sex workers were identified. Based on our experience and the literature, we selected the main psychological and social conditions that directly affect behavior which we considered to be the primary mediating factors in sexual decision-making among sex workers. These were risk perception, perceived control, structural and environmental factors related to sex work operations, and relationship intimacy between the sex worker and her sex partner. In order to establish reliability, we obtained multiple viewpoints through interaction with colleagues who worked with sex workers as well as from the sex workers themselves. These four factors were also identified by HIV prevention colleagues and sex workers who were consulted as being the primary factors that influence sexual decision-making. Reliability, also referred to as dependability in qualitative research, is the extent to which data collection procedures and analysis yield the same answer for multiple participants in the research process (Kirk & Miller, 1986).

The other risk factors we identified acted on sexual decision-making through influencing one of the four primary mediating factors. These were considered to be contributing factors. This approach integrated the data into a meaningful framework for understanding the relationships among the many different risk factors. These were also compared with the viewpoints of colleagues. The primary mediating factors and the contributing factors were organized in a relational schema to form a framework for analysis in Phase 2. This framework was checked against established risk frameworks such as the proximate determinants framework (Boerma &

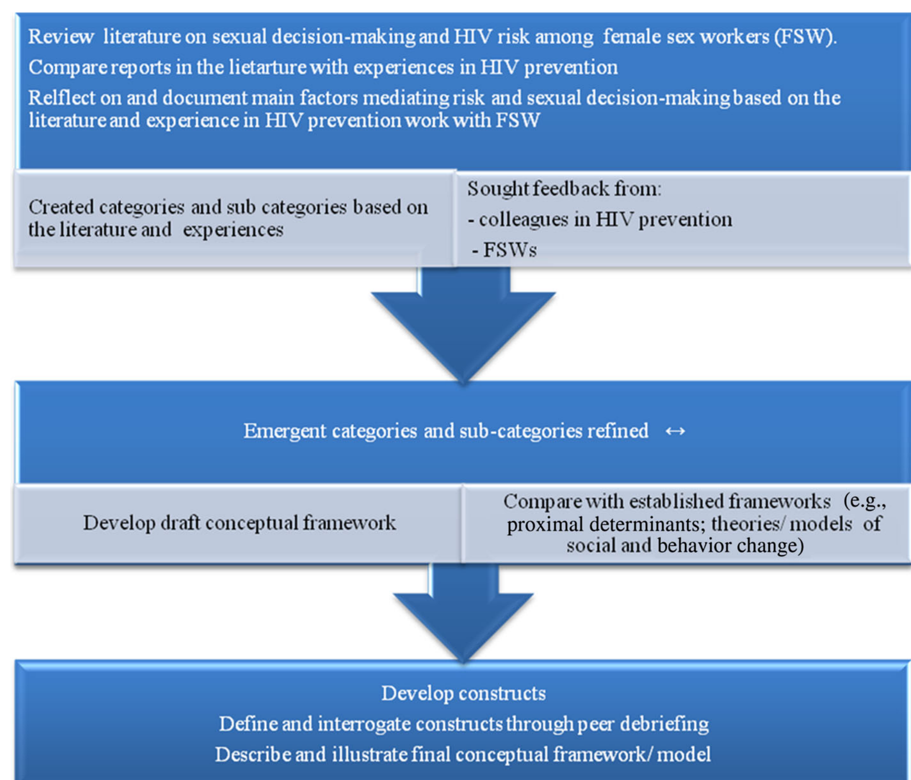

Fig. 1 Methodology using the Constant Comparison approach

Weir, 2005) and the principles of social and behavior change (Conner & Norman, 2005) in order to check the interpretations. The proximate determinants framework links the social and environmental determinants of HIV infection such as demographics and gender norms with the biological determinants such as rate of exposure to infected persons. The proximate determinants are both behavioral and biological in nature e.g. coital frequency and the presence of other STI (Lewis et al., 2007). The principles of social and behavior change refer to the synthesis of evidence from behavior change models and theories about ways in which behavior change can be achieved at the individual group or societal level (Conner & Norman, 2005). In keeping with the grounded theory paradigm, our interest was not only in the sex workers' perceptions of the sexual decision-making processes, but also to discover underlying patterns of interaction between all the elements that could possibly contribute to sex workers adopting safer sex measures.

In Phase 3, each construct of the model/framework was examined through three rounds of peer briefing with a panel of three qualitative researchers and six HIV program managers who have conducted research as well as implemented and evaluated interventions for sex workers. These debriefing sessions were used to test the documented insights and to solicit critical questions and feedback. The conceptual constructs were refined at each stage of these interactions based on consensus reached by the panel. At this stage, the separation between mediating and contributing factors was confirmed, and subcategories or contributing factors such as the internal locus of control and the nature of sex work operations that were not originally included in the framework were added. The process also involved deep interrogation of the definitions of the primary mediating factors and their particular and often overlapping contributing factors. For example, gender and power were felt by some to be a primary mediating factor but was concluded to be a part of mediating factors such as relationship intimacy, perceived control, and linked partly to the environment.

Conceptualization of a Sexual Decision-Making Framework

The common characteristics identified in the literature that put sex workers at risk for HIV infection include lack of accurate information about HIV transmission, poor condom use and condom negotiation skills, coercion/violence, substance use and socioeconomic vulnerability as well as partner status (Campbell, Perkins, & Mohammed, 1999; Murray et al., 2007; Panos Institute, 2000; Surratt, 2007). In the process of conceptualizing the framework for sexual decision-making by sex workers, the common characteristics of risk described in the literature were also identified in the Jamaican context. These were found to modify the sex worker's ability to adopt risk-reducing behaviors within a complex interplay of situational and environmental factors (Hope Enterprises, 2005; PANCAP, 2009), partner characteristics (Allen et al., 2006; Murray et al., 2007; Norris, Masters, & Zawacki, 2004), relational motivation (Bombereau & Allen, 2008; Eldemire-Shearer & Bailey, 2008) and the individual sex worker's personality (Campbell & Campbell, 2001; Duncan et al., 2010; Zawacki et al., 2009). These characteristics were used to develop the constructs of a conceptual framework to explain the contributing and primary mediating factors in sexual decision-making among FSW (Fig. 2). The framework identifies four main determinants or primary mediating factors of HIV prevention/safer sex behaviors among FSW, namely risk perception, relationship intimacy, perceived control, and the structural and environmental elements of sex work.

There are several variables or contributing factors that influence the four primary mediating factors for sexual decision-making among sex workers. We will describe each of the four primary mediating factors in turn.

The perception of risk results from the sex workers' knowledge of and attitude towards STIs, including HIV, as well as the use of substances such as alcohol and drugs that can impair judgment and reduce inhibitions (Campbell et al., 1999; Heemskerk & Uiterloo 2009; Surratt, 2007). The perceived social and economic status of the client or partner as well as the perceived relationship and her own economic vulnerability also contribute to her level of risk perception. Creating awareness of risk is acknowledged as a first step towards influencing behavior change Darnton (2008). People are not motivated to take protective actions unless they perceive susceptibility. Moreover, the measures that they choose are sometimes inappropriate or inadequate unless they have the correct information, attitudes and skills to take appropriate action. In Jamaica, the percentage of women reporting having ever used condoms increased from 51 % in 1988 to 62.5 % in 1992 and 73 % in 1994 and 1996 (Figueroa et al., 1998) in response to HIV and STI awareness building interventions for the general population, sex workers and their clients. Another modifier of risk perception, intoxication interferes with the detection of cues to risk even where knowledge is high and attitudes to preventive behaviors are positive (Davis, Stoner, & Masters, 2009). Jamaican sex workers use alcohol and other substances especially marijuana to boost their confidence to behave/perform in ways that will attract and please the client and enhance their ability to demand high rates of remuneration. Furthermore, the perception of HIV risk and application of prevention measures become low priority when proximal, daily survival needs are overwhelming for those sex workers with poor social support (Campbell & Campbell, 2001; Eldemire-Shearer & Bailey, 2008; Worth, 1989). Familiarity with sex partners and their perceived socioeconomic status have also been shown to lead to comfort or ambiguity to clear risk

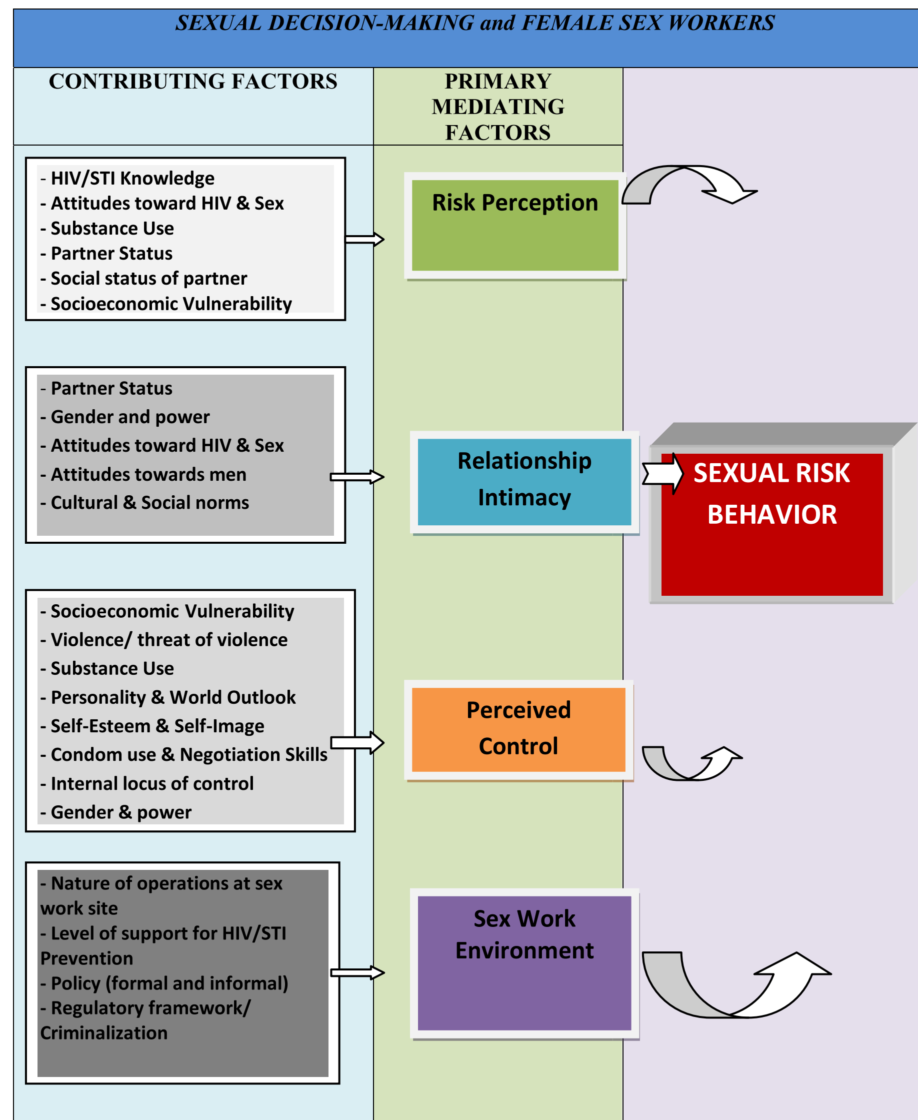

Fig. 2 A conceptual framework for sexual decision-making among female sex workers in Jamaica

cues among Jamaican sex workers leading to non-use of condoms with certain types of clients (Duncan et al., 2010; Eldemire-Shearer & Bailey, 2008).

The sex worker's perception of the role and social status of her paying or non-paying partner, her assessment of the nature of the relationship as well as her attitude towards sex and sex work usually determine the level of relationship intimacy. Our experience suggests that relationship intimacy is a key factor influencing condom use, and this is supported by the sex workers' testimonies and the literature (Bombereau & Allen, 2008; Duncan et al., 2010; Hansen et al., 2002; Murray et al., 2007). In Jamaica as well as other parts of the Caribbean, relationship intimacy often results in inconsistent condom use because the female sex worker either lacks power in the relationship or she defers using protection because of the special status of the relationship (Duncan et al., 2010; Hansen et al., 2002; Murray et al., 2007). The link between regular trusting relationships and a decrease in condom use has been observed in a range of global studies mentioned earlier.

Our observation of sex work in Jamaican tourist areas has demonstrated that these relationships exhibit wide variations in the context of encounters, relationship development over time, the role of gender and race/nationality in structuring interactions, as well as the subjective experiences of both partners. This phenomenon is not unique to Jamaica and is discussed by Nagel (2003) and others. Member checking with sex workers and peer briefings reveal that FSW who operate in the tourism industry seek to solicit tourists who are perceived, based on race and country of origin, to be the most generous and who are inclined to pursue multiple encounters. Perceptions of generosity and/or ability to pay higher fees are commonly linked to race and most FSW in tourist areas report preferring "white" tourist clients while regarding Jamaican clients as a poor alternative when tourist clients are unavailable (Boxill,

2005).They are also more likely to consider the risk of sex without condoms with the more-desirable white tourist than with these less-desirable local clients. This preference was also found among Jamaican sex workers outside of tourist areas (Eldemire-Shearer & Bailey, 2008).

The dimensions of sex work with regular clients with whom they have developed a long-term relationship as well as multiple visit tourist clients are often subtle and sometimes involve gifts and favors as well as direct sex-for-money transactions (Kempadoo, 1999, 2007). These exchanges frequently incorporate romance and other forms described by Padilla, Guilama-Ramos, Bouris, and Matiz Reyes (2010) as "emotion work" that transcend the purely sexual. The more intimate exchange relationships may involve regular return visits, mutual affection or love, and significant remittances or financial support from abroad. These relationship modifiers present the same barriers to condom negotiation that have been observed for stable non-paying relationships globally. In the case of non-tourist-related encounters, behavioral surveillance and experience showed that condom use with non-regular clients was significantly higher than with regular clients and main partners (Duncan et al., 2010).

Perceived control is influenced by individual qualities, such as self-esteem, motivation, and self-efficacy related to managing the elements of sex work and practicing safer sex, including negotiating condom use and condom use skills (Gerrard, Gibbons, Reis-Bergan, & Russell, 2000). Sex workers reported that substance use weakened their ability to control client demands including condom usage. Substance use (alcohol, marijuana, and/or ecstacy) is a part of most solicitation circumstances or locations, i.e., street, club, bar and massage parlors (Eldemire-Shearer & Bailey 2008; Hope Enterprises, 2005). The sex workers' world outlook and internal locus of control are also important to their perceived control in the practice of safer sex behaviors (Burns & Dillon, 2005). Locus of control refers to a person's perception of control or responsibility for his own life and actions.

Those sex workers who believe forces outside of themselves are responsible for their misfortunes or successes subscribe to an exterior locus of control and are less likely to be consistent with their application of condom use (Visintini et al., 1995). Those who view their life and destiny as a result of their own doing subscribe to an interior locus of control and are more likely to use condoms consistently and take other safer sex measures such as avoiding intoxication with substances and choosing sex work environments that provide access to more cooperative clients (Burns & Dillon, 2005; Gerrard et al., 2000; Morril, Ickovics, Golubchikov, Beren, & Rodin, 1996). Observations of the differing attitudes of sex workers who report frequent episodes of victimization and violence from clients and those who do not reveal that the tendency is often related to their personality or character traits and philosophical world outlook or worldview. This was confirmed in discussion with the sex workers who described themselves as "god blessed" or "lucky" because they remained HIV negative.

Non-volitional elements such as coercion, violence and the threat of violence as well as social and economic vulnerability are also important factors influencing perceived control. Choice and decision-making in sexual interactions can be removed by physical threat of violence from a client (Decker, Pearson, Illangasekare, Clark, & Sherman, 2013) or threat of being unable to meet her socioeconomic needs and those of family members that she may support, especially children (Kline & Vanlandingham, 1994). This socioeconomic aspect is particularly relevant given that most Jamaican FSW are poor uneducated single mothers (Eldemire-Shearer & Bailey, 2008; MEASURE Evaluation & Jamaica Ministry of Health, 2009) who described their economic vulnerability as the push factor for entering sex work and for succumbing to client requests for non-use of condoms.

Human trafficking related to sex work in the Caribbean creates a unique type of non-volitional element. Definitions of trafficking in the various territories are often inconsistent and activities are generally undocumented. Based on the 2000 United Nations definition, it clearly exists in Jamaica. Trafficking of Jamaican sex workers takes widely varying forms (UNODC, 2004) creating a continuum between consented recruitment arising from socioeconomic vulnerability to debt bondage and smuggling resulting from coercion and forced labor (PANCAP, 2009). However, there is little documentation of actual trafficked cases in Jamaica and the rest of the Caribbean. Even without overt coercion, expenses imposed on sex workers (by club and brothel owners/managers and corrupt officials) may force them to work more intensely and for longer periods. Member checking with sex workers reveals very mixed perspectives. For example, travel to other territories within and outside the Caribbean is regarded by one set of sex workers as a "good opportunity" and another set as a terrible ordeal despite both sets experiencing similar conditions and arrangements such as the withholding of travel documents by the employer or recruiting agent.

The structural and environmental elements of sex work include regulation, policies, conditions of work and availability of supports for safer sex practices including the types and nature of the services being offered in the sex work setting (Kempadoo, 2007). One important structural element is the type of sex work site, i.e., street, club or massage parlour. Conditions may also vary significantly between clubs depending on the attitude, expectations and standards set by different club owners (Hope Enterprises, 1993). Behavioral and structural determinants also influence each other. An example of this occurs when risk perception and perceived control are significantly affected by drug and alcohol use (key features of some settings). The use of these substances often negates or reduces the influence of any protective structural and environmental elements provided in the setting (Pitpitan et al., 2013; Stoner, George, Peters, & Norris, 2007). Crack and cocaine use, for example, is

higher among street-based sex workers than those in a club or massage parlour setting, while more alcohol use is present among those in settings where alcohol is served such as the bars and clubs. In turn, HIV prevalence among sex workers who are crack and cocaine users is higher than among non-users (Duncan et al., 2010; Panos Institute, 2000; Surratt, 2007; UNAIDS, 2009a, b). The criminalization of sex work and the associated police harassment poses a threat to the sex workers' access to prevention interventions, although this is partly diminished in the Jamaican context. The Jamaican HIV Prevention Programme has gained the cooperation of the police in significantly reducing the arrest and prosecution of sex workers except where human trafficking is suspected.

Discussion

The conceptual framework describes the key elements that influence sexual decision-making among sex workers. It includes elements that are described in the literature about sex work in the Caribbean and beyond. The framework seeks to go further by providing an understanding of how the primary mediating factors of sexual decision-making are shaped by their contributing elements. It also provides a unique qualitative perspective as the constructs were developed out of scrutiny of sex work over two decades while delivering HIV prevention services and are validated by the sex workers themselves. The elaboration of the constructs of this framework as manifested in the Jamaican context may contribute to the literature by building our understanding of the primary mediating and contributing factors that are present in sex work operations elsewhere in the Caribbean and worldwide. The framework supports a growing body of sexual risk taking literature indicating that a combination of personal, interpersonal and situational characteristics shape sexual decisions (Davis, Hendershot, George, Norris, & Heiman, 2007; Norris et al., 2004). The framework also supports and provides an elaboration of established theoretical frameworks that are used to guide behavioral research, intervention and evaluation. In Jamaica, it specifically provides an explanation of why sex workers continue to test positive for STIs despite over 90 % condom use with clients (Duncan et al., 2010; MEASURE Evaluation & Jamaica Ministry of Health, 2009).

The interaction of the four primary mediating factors, i.e., risk perception, relationship intimacy, perceived control and sex work environment, combine to determine whether the sex worker decides to practice unprotected sex or not. Unlike the theory of reasoned action, this model/framework does not consider behavioral intention (Ajzen & Fishbein, 1980) a key factor in sexual decision-making; instead, it is a combination of the strength and weaknesses of these four factors in each specific situation. While the health belief model (Rosentock, Strecher & Becker, 1988) hypothesizes that behavior change depends on the simultaneous occurrence of motivation, perceived susceptibility and perceived benefits of the recommended behavior, this framework suggests that the strength of each construct to influence behavior change can vary in specific contexts. For example, if risk perception is low and perceived relationship intimacy is high, combined together they may be powerful enough to outweigh the sex worker's perceived control over her ability to use a condom or not. This is similar to the cognitive mediation model's (CMM) "primary appraisals" whereby the sex worker evaluates the possibility that the liaison with the man could potentially develop into a relationship in keeping with her goals of establishing a romantic relationship (Norris et al., 2004). In the CMM's process of "secondary appraisal," the woman would then evaluate the degree to which having sex in the situation will facilitate the goal of beginning or deepening a relationship with the man. Both the appraisal and the perceived control can be influenced with supportive policies such as consistent condom distribution, placing complimentary condoms in a brothel or hotel room, as well as cues to safer sex strategically placed in the site for the attention of the male client as well as the female sex worker. These practices are features of the HIV/STI prevention and control response in Jamaica since the early 1990s (Hope Enterprises, 1993). This has resulted in 80 % of sex workers reporting that they received free condoms at a worksite in the past 4 weeks, while 97 % said that they had used a condom with a new paying partner at last sex (Duncan et al., 2010; MEASURE Evaluation & Jamaica Ministry of Health, 2009).

Each of the four primary mediating factors is modified by other elements. Risk perception is affected by the level of knowledge of HIV transmission and prevention including the rejection of myths and whether or not substances such as marijuana, ecstasy or alcohol are being used by the sex worker. Similarly, perceived control is influenced by both personal and environmental factors related to the sex worker or her place of operation. For example, a sex worker with low self-esteem, who is desperate for some ready cash (economic vulnerability) and who is soliciting from a site where the customers do not have high incomes and so have limited ability to pay a substantial fee, will be more likely to have low perceived control in being able to say no to offers of more money for not using condoms. Relationship intimacy in this framework operates as "value expectancy" similarly identified in the social cognitive theory (Bandura, 1977) as a function of the subjective value of an outcome and expectation of what the outcome will lead to.

The role of relationship intimacy is influenced by the sex worker's attitudes towards sex and status of the partner as well as social and cultural norms about gender and the sexual roles of males and females. If the partner is a main partner or regular customer, especially one who treats the sex worker as more than just a provider of sexual services and she regards unprotected sex as a way of indicating "special status" to the sex

act, then she may be more likely to make relationship intimacy impact her decision to have unprotected sex. Outside of her role as a provider of sexual services, the sex worker operates along the same cultural norms as the rest of the society and therefore needs to self-actualize as a specifically desired female who is a valued part of some man's life (Campbell & Campbell, 2001; Eldemire-Shearer & Bailey, 2008; Kerrigan et al., 2003). Regular clients are potentially a source of identifying this type of relationship status, and therefore risks are taken as an investment into something more than a transaction, often resulting in no condoms being used. Three of the four constructs that directly influence sexual behavior are mainly influenced by the individual sex worker's circumstances or by the specific situation in which she may operate. The fourth construct (sex work environment and policies) is structural. This can take the form of legal frameworks that allow or do not allow the regulation of the conditions of the work of sex workers. It also includes formal and informal policies in related industries such as bars, clubs, massage parlours and the hotel/tourism trade that can mandate a supportive environment for risk reduction including cues to preventive action such as free or subsidized condom distribution and regular HIV testing. Supportive risk reduction interventions may also include social programs that can address social and economic vulnerability.

There are some limitations of the current study. The framework is preliminary and remains to be tested in order to establish its true value. The framework identifies the key factors involved in sexual decision-making. However, it does not guide us in determining which factors are more important in different contexts. This requires further elaboration and future study.

Conclusion

This sexual decision-making framework helps fill a gap in existing models and theories by making a distinction between primary mediating factors and contributing factors, and establishes a relationship between these two sets of factors that influence the female sex worker's decision-making in transactional and relational sexual situations.

The conceptual framework is consistent with the achievements of the Jamaican National HIV/STI Programme and suggests additional opportunities for intervention such as structural and social approaches which have been limited in Jamaica. Actions such as decriminalization of sex work and declaring specific areas "red light districts" may enhance the efforts of public health authorities, researchers and HIV prevention efforts to promote risk reduction interventions and changed behaviors among sex workers, clients and facilitators of sex work. This framework has also identified a number of barriers to successful risk reduction that require additional attention so as to maximize the success of existing efforts and to ensure continued reductions in unsafe sex in the future.

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