Drug and Alcohol Dependence 183 (2018) 267–274

Contents lists available at ScienceDirect

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep

Full length article

Gender and race as correlates of high risk sex behaviors among injection drug users at risk for HIV enrolled in the HPTN 037 study

Mandy J. Hill[a,*], Michael Holt[b], Brett Hanscom[b], Zhe Wang[b], Marylou Cardenas-Turanzas[a], Carl Latkin[c]

[a] McGovern Medical School, University of Texas Health Science Center, Houston, TX, United States
[b] Fred Hutchinson Cancer Research Center, Seattle, WA, United States
[c] John Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

ARTICLE INFO

Keywords:
Injection drug use
High risk sex
African american
Gender
Race

ABSTRACT

Background: Sexual contact has been shown to be a major mode of HIV transmission among people who inject drugs (PWID). This study examined gender and racial differences among PWID' sexual risk behaviors from the perspective of sexual scripts.

Methods: 696 PWID enrolled from Philadelphia on HPTN 037 were classified as engaging in high-risk sex behaviors if they reported having sex in the past 30 days and condomless sex with a non-primary partner, giving/receiving sex for money, or multiple partners. A multivariable logistic regression model was used to assess associations between demographic factors and high risk sex.

Results: Findings of the multivariable regression analysis demonstrated that being White (OR = 0.52, $p < 0.001$) and male (OR = 0.59, $p = 0.002$) were protective of high risk sex, while homelessness (OR = 1.7, $p = 0.005$), and being single (OR = 1.83, $p = 0.006$) were positively associated with high risk sex. African American (AA) women were 1.7 times more likely to report high-risk sex than AA men ($p = 0.002$), 3.28 times more likely than White men ($p < 0.001$), and 1.93 times more likely than White women ($p < 0.001$).

Conclusions: Since AA women report high-risk sex behaviors more than other demographic groups, behavioral interventions for HIV risk reduction among PWID may benefit from focusing on sex-risk reduction among AA women.

1. Introduction

Injection drug use (IDU) continues to be an important risk behavior in the HIV epidemic in the US (Spiller et al., 2015). New HIV cases transmitted by IDU have decreased significantly in the last decade. However, IDU continues to be a source of HIV transmission in the US (CDC, 2012; CDC, 2014). In 2015, 6% (2392) of HIV diagnoses in the US were attributed to IDU (CDC, 2015a). Of those new HIV infections, 41% (980) of persons who inject drugs (PWID) were women and 23% (539) were African American (AA) (CDC, 2015a).

Historically, HIV prevention interventions for injection drug-using populations have shown efficacy at decreasing injection risk behavior, sharing needles/syringes, sharing injecting paraphernalia, and to a lesser extent unprotected sex (Meader et al., 2013). Targeted strategies to decrease injection drug use risks and sexual risks among PWID have been successful among diverse groups; however, the literature is missing data on strategies tailored to subgroups within vulnerable populations. Although HIV prevention strategies have targeted sexual risk, they may have been underestimated sexual risk as an HIV transmission route for PWID. A behavioral analysis in 2012 among 9425 PWID found that 30% engaged in receptive syringe sharing, 70% reported condomless vaginal sex, 25% of heterosexuals had engaged in condomless anal sex, and 5% reported condomless sex among male-to-male sexual contact (Spiller et al., 2015). These findings and other research findings suggest that sexual transmission may be an important source of HIV infections among PWID (Kral et al., 2001; Semaan et al., 2006; Strathdee et al., 2001).

Given the positive link between high risk sex and HIV transmission among PWID, specific factors that lead to high risk sex should be explored. Reports of a main sex partner has demonstrated a protective effect against HIV risks (Kral et al., 2001). Some research suggests that among women who inject drugs, IDU behaviors may be less influential in HIV seroconversion as compared to high risk sex behaviors (Strathdee et al., 2001). Given the influence of high risk sex on HIV

* Corresponding author at: University of Texas Health Science Center at Houston, McGovern Medical School, 6431 Fannin JJL 431, Houston, TX 77030, United States.
E-mail addresses: mandy.j.hill@uth.tmc.edu (M.J. Hill), mholt@scharp.org (M. Holt), bhanscom@fredhutch.org (B. Hanscom), zwang235@scharp.org (Z. Wang), Maria.CardenasTuranzas@uth.tmc.edu (M. Cardenas-Turanzas), carl.latkin@jhu.edu (C. Latkin).

https://doi.org/10.1016/j.drugalcdep.2017.11.018
Received 13 March 2017; Received in revised form 20 November 2017; Accepted 20 November 2017
Available online 04 January 2018

transmission among women, a more in-depth understanding of factors that contribute to decisions to engage in high risk sex is warranted.

1.1. Theoretical framework

The relevance of sexual/gender theoretical frameworks were substantiated through their use in public health research aimed at better understanding sexual risk behaviors in the context of HIV and related public health issues (Bowleg et al., 2015; Eaton and Stephens, 2016; Horley and Clarke, 2016; Stephens et al., 2017). A theoretical framework built on both the Sexual Script Theory (SST) and the Theory of Gender and Power (TGP) highlights the influence of gender roles on sexual behaviors of women. Through presentation of gender as a social construct that organizes social relationships, this theoretical framework provides social context to sexual interactions between women and men (Farmer et al., 1996; Mantell et al., 2006; Schoepf, 1992). Research findings report that some men find it easy to initiate sexual activity (McLellan-Lemal et al., 2013) and express comfort with the role as the initiator when compared to women (Hickman and Muehlenhard, 1999; Vannier and O'Sullivan, 2011). Comparatively, women described an ideal sexual scenario as a situation whereby the male partner is the initiator (Bowleg et al., 2004; Morgan and Zurbriggen, 2007; Ortiz-Torres et al., 2003). Women have acknowledged maintenance of relationships with men who they perceive to engage in 'high-risk' sex behaviors (multiple partners, sex while under the influence of drugs/alcohol, sex with both men and women, concurrent partnerships) (Farmer et al., 1996; Mantell et al., 2006; Schoepf, 1992; Semaan et al., 2002). However, few researchers have evaluated the impact of gender roles on 'high-risk' sexual acts (Wagstaff et al., 1995). Both the SST and TGP help to explain how the relationship between gender and sexual risk has relevance for injection drug-using populations (Hill et al., 2016). In particular, SST describes the process whereby sexual experiences establishes 'normal sex' scripts.

1.2. Sexual script theory

Sexual scripts are influenced by complex emotions (Jones, 2006; Slovic, 1999). The SST focuses on the ways culture shapes perception and expression of appropriate and socially acceptable sexual behavior (Bowleg et al., 2004; Gagnon and Simon, 1973; Holman and Sillars, 2012; Jones, 2006; McLellan-Lemal et al., 2013). In regards to sexual risk, women have high risk of HIV acquisition from sexual encounters that involve a transaction of sex for drugs that do not include condom use, and/or occur with numerous partners concurrently or in succession (Booth et al., 2000). Women are at higher risk of HIV and other STI acquisition from unprotected sex, as well as pregnancy during heterosexual sexual intercourse ((Miller et al., 2004; Blythe et al., 2006). The traditional sexual script of condomless sex offers men more sexual autonomy, opportunities for sexual satisfaction, and well-being than it does women (Amaro et al., 2001; Masters et al., 2013). Scripts provide widely shared gender and culture-specific guides for sexual behaviors (Bowleg et al., 2015; Hill et al., 2017). They also offer a blueprint of predictable responses to sexual cues and dictate how men and women behave sexually (Hill et al., 2016; McLellan-Lemal et al., 2013; Roye et al., 2013;).

Stephens and Phillips (2005) led the focus of females' sexual script development research on AA women. Qualitative research has found that within sexual scripts among AA women, the power in the heterosexual relationship favors the man (McLellan-Lemal et al., 2013), supporting a dynamic where women may be vulnerable to the decisions made by her male partner (Hill et al., 2017; Hill et al., 2016; Martyn and Hutchinson, 2001; McLellan-Lemal et al., 2013). This illustrates the intersectionality of the SST and TGP. Like the SST, the TGP is a sound theory to help clinicians and interventionists better understand sexual risk behaviors in the context of HIV for an exceptionally vulnerable population, AA women who inject drugs.

1.3. Theory of gender and power

The TGP compliments the SST in addressing vulnerability of the woman to the man. Culture and societal norms reinforce value systems giving decision power to men, including sexual decisions. As a result, risk reduction practices that could be effectively led by women are impeded (Jones, 2006; Slovic, 1999). In circumstances where a conflict occurs between a woman's relationship health and her own sexual health, the sexual script provides a roadmap to the sexual decision. When the decision is led by traditional sexual scripts wherein the decision making power belongs to the man, the decision made may introduce HIV risks. TGP discusses the influence of gender-based inequalities at the societal level where men are supported in controlling sexual decision making (Pulerwitz et al., 2006; Pulerwitz et al., 2002). Societal support moves beyond sexual decision making and permeates the type and frequency of sex (Dixon-Mueller, 1993). It also influences relationship dynamics, permeating the way people manage conflict, power, communication (Bowleg et al., 2004) and norms by better understanding gender-based inequalities in society. Gina Wingood applied TGP to powerlessness of AA women in sexual decision making (Wingood and DiClemente, 1992, 1998, 2000; Wingood et al., 2003; Wingood and Scd DiClemente, 2000). She found that encouraging men to use a condom raised concern of perceived infidelity by the women. TGP offers an explanation of the influential power of gender on sexual risk.

1.4. Link between theories and high risk sex behaviors

Few research agendas have explored demographic correlates of high risk sex behavior with a hypothesis that stems from a theoretical framework comprised of the SST and TGP (Hill and Andrews, 2017; Hill et al., 2017; Hill et al., 2016). In a study where 44 heterosexually active men and women aged 18–25 years were interviewed, men preferred recreational sex, valued sex over relationships, and sought out multiple sex partners, while women preferred sex in the context of commitment and monogamy and sought emotional intimacy and trust with sex (Masters et al., 2013). Justification of multiple partners among women entailed conforming to traditional gender roles of being desired, but not desiring sex. The sexual script of women enrolled in a study of 30 substance-using, AA women ages 18–25 years involved use of sex as a partner pleasing tool to elicit a stronger emotional response (i.e., like, love) from the male partner and to fulfill what they perceived as their obligation in the relationship (Hill and Andrews, 2017; Hill et al., 2017). In addition, sexual scripts here condomless sex is normative were associated with a defined phase within a long-term relationship where women deemed their partner trustworthy (Hill and Andrews, 2017).

In a British study, 3395 men and 4980 women ages 16–44 years were sexually-active substance users (Paquette et al., 2017). Men and women reported 5 or more partners (AOR = 5.03 and 4.15 respectively), men and women reported 2 or more sexual partners without a condom (AOR = 5.50 and 5.24), and men who traded money for sex in the past year (AOR = 2.47) were more likely to report recent illicit drug use when compared to referent others based on sociodemographic, health related factors, and sexual behaviors. Study findings of US and British studies collectively illustrate a correlation between high risk sexual behaviors and illicit drug use that appears to be moderated by gender; thus, this illustration warrants the need to examine established relationships among PWID through relevant theoretical frameworks.

The SST and TGP provide a theoretical framework to examine associations between gender, race, and HIV risks driven by high risk sex behaviors. Although the HIV Prevention Trials Network (HPTN) 037 study was not developed with a SST and TGP as its theoretical framework, application of these theories to correlations between gender, race, and sexual risk informs our research question assessing whether there is an association between gender and/or race and 'high risk'