Social Action Theory and HIV Risk Behavior: Early and Midlife Contextual Influences of Incarcerated Women in Washington State

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Abstract

Social Action Theory and HIV Risk Behavior: Early and Midlife Contextual Influences of Incarcerated Women in Washington State

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Objectives: To employ Social Action Theory (SAT) to better understand the sociocultural and psychosocial experiences of Washington State's incarcerated women when they are outside of the criminal justice system and how these experiences impact HIV risk behavior. To identify known HIV risk behaviors that impact women involved in the criminal justice system (WICJS) in Washington State, and explore intrapersonal, interpersonal, and environmental factors that influence how WICJS negotiate engagement in HIV risk behaviors pre-/post-incarceration when they are in their community. To use the results of this study to create a set of recommendations for The IF Project (TIP)'s health and wellness program and the SHIELD program, two HIV-related health interventions currently being implemented in women's correctional facilities in Washington State.

Design: This study is a directed content analysis of twenty semi-structured one-on-one interviews with incarcerated women in Washington State, ten of which were conducted with women at a county jail and the other ten at a state prison. Codes were derived from previous research that identified contextual HIV risk factors and other variables that impact WICJS, as well as emerging variables that surfaced during the first phase of analysis. Analysis was completed using inductive and deductive approaches and codes were clustered into dominant themes based on their interrelated characteristics within the realm of SAT.

Results: Early life contextual influences included unstable home environments, trauma and abuse, and substance use. Midlife contextual influences included having previously been incarcerated, unstable housing, poor mental health, substance and alcohol use (especially intravenous drug use [IDU]), trauma and abuse, having relationships with male partners who were previously incarcerated, having a male partner cheat on them, trading sex, having a history of STI diagnoses, barriers and facilitators to HIV/STI testing, and barriers and facilitators to condom use.

Discussion: The findings of this study correspond with known HIV risk behaviors for WICJS and suggest that engagement in HIV risk behaviors for WICJS are dynamic, multifactorial, oftentimes occurring in concurrence, and span throughout the life course. The findings of this study indicate additional information and practices that can be included in TIP's health and wellness program and the SHIELD program to better address the unique needs of this population, especially in regards to addressing HIV risk behaviors such as trauma and abuse,

IDU education, condom negotiation, and HIV risk behaviors that occur throughout the life course.

Conclusions: Incorporating the findings of this study into TIP's health and wellness program and the SHIELD program has the potential to decrease HIV risk behaviors. Future HIV interventions targeting this population should aim to address how substance and alcohol use influences intrapersonal generative capabilities such as coping skills and self-esteem, as was seen with many of the participants who used substances to temporarily numb negative feelings and/or to ease stress. Furthermore, future interventions that occur earlier in the life course should be developed and aim to interrupt intergenerational trends in HIV risk behavior by targeting younger women populations at risk of becoming criminal justice-involved.

INTRODUCTION

In the United States, cisgender women (women whose gender identity corresponds with the sex they were assigned at birth) account for 23% of people living with HIV/AIDS and 19% of new HIV infections.[1] To reduce HIV incidence rates among women in the US, public health researchers must create targeted prevention interventions that address the confluence of sociocultural factors that affect at-risk subsets within this already at-risk population. One of the most vulnerable and understudied groups affected by HIV in the United States is women who are or have been incarcerated, referred here on as women involved in the criminal justice system (WICJS).

UNAIDS defines incarcerated women as a key population that is being left behind in the effort to curb HIV/AIDS both domestically and globally.[2] Approximately 1.9% of incarcerated women are living with HIV[3] and roughly 50% of incarcerated women have self-reported that they have had a sexually transmitted infection (STI) in their lifetime.[4] HIV prevalence among incarcerated women is almost 13 times higher than the prevalence for non-incarcerated women[5] and is also higher than estimates for incarcerated men (1.5%).[3]

Known HIV risk factors for WICJS include family history of substance use,[6] previous sexual and/or romantic relationships with incarcerated male partners,[6] exposure to STIs,[1, 6, 7, 8] multiple/concurrent casual sex partners,[7, 8] multiple casual condomless sex partners,[7] a history of trading sex,[7] poor mental health including depression and anxiety,[5, 9] substance use (especially intravenous drug use [IDU]),[1, 8, 10] poor social support systems,[4, 6, 9] and experiences of interpersonal violence, such as childhood abuse or intimate partner violence (IPV).[4, 6, 8, 9, 11]

Each year, over 22,700 women living with HIV/AIDS are released from correctional facilities after having typically served short sentences and return to their community.[5] Upon

release, women often participate in behaviors that put themselves or others at risk of HIV infection, such as substance use, having sex under the influence of substances, inconsistent use of preventative measures, increased number of partners, engaging in risky behaviors with high-risk partners, and sex work.[4] Identifying and understanding the interpersonal nature of these risk factors can improve public health interventions for this at-risk population, as their effectiveness will be dependent on their cultural responsiveness, appropriateness, and sensitivity, and on how well they address the needs of women who are or who have been incarcerated.

Incarcerated Women in Washington State

There is a dearth of Washington State-specific research on HIV risk factors for women who are or who have been incarcerated. More broadly, the King County Department of Adult and Juvenile Detention (KC-DAJD) reports that an estimated 3-4% of incarcerated persons within King County jails are living with HIV,[12] and that women account for 11.1% of adults in King County jails.[13] Between 2005-2007, KC-DAJD found that 0.9% of the women they tested for HIV received positive results.[12] Data relating to women in Washington State prisons is limited, but several seroprevalence studies, the most recent conducted in 2009, by the Washington State Department of Corrections (DOC) and Washington State Department of Health (DOH) estimate that 0.6% of both men and women in the state prison system were living with HIV (Lara Strick, DOC Infectious Disease Specialist, email communication, August 20, 2018). In addition, when DOC began offering opt-out testing for incarcerated populations upon entry into prison, on average 95% of the women agreed to be tested compared to >60% when offered opt-in HIV testing upon entry.[14]

Social Action Theory

Analyzing and applying findings from available Washington State-specific data regarding WICJS to intervention tactics could improve social support systems and establish the necessary groundwork for professionals to effectively and positively impact health behavior within these populations. Incorporating theoretical frameworks into this kind of research can help structure future interventions, as theory-based behavioral interventions have been shown to be more effective than those without such underpinning (especially with safer sex education).[15] Social Action Theory (SAT), which has been used in previous HIV-related research,[16, 17, 18, 19] is a theoretical framework that lends itself well to understanding the HIV risk behaviors of WICJS due to its emphasis on personal, social, and environmental factors and is useful for addressing cultural responsiveness, appropriateness, and sensitivity needed when working with this population.

As a theory, SAT envisions health behavior as an interactive and multidimensional process informed by contextual influences, self-change processes, and action states. Contextual influences—which include intrapersonal, interpersonal, and environmental contexts—impact the self-change processes that either maintain or change health behaviors (i.e. an action state). Contextual influences affect self-change processes by influencing how individuals engage in social interaction processes (e.g. negotiation skills and social support) as well as how individuals manage generative capabilities (e.g. coping skills and self-esteem). Social interaction processes and generative capabilities in turn affect the problem solving skills and motivational appraisals (e.g. social cognitive mediators, outcome expectancies, self-efficacy, social norms, behavioral intentions, and process measures) that individuals use to maintain or change health behaviors.[16, 17]

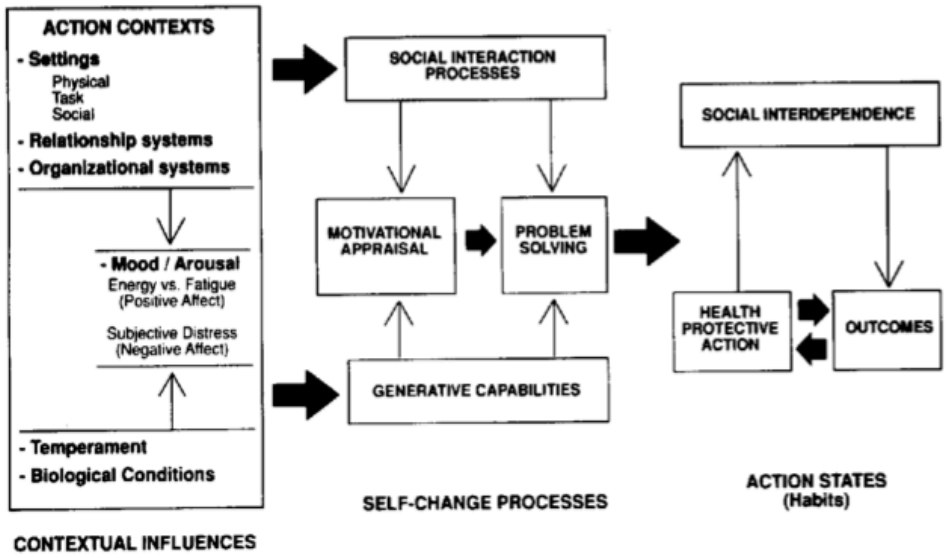

Figure 1. SAT Model from Ewart CK. Social action theory for a public health psychology. *The American Psychologist*. 1991;*46*(9):931-946. doi:10.1037/0003-066X.46.9.931.

SAT postulates that psychological regulation—the ability to have control over one's individual and interpersonal environment—is a core factor that influences health behaviors. Lacking this control could negatively impact the ability to make important health behavior changes, and even potentially lead to a complete inability to make these changes.[20] While SAT borrows from other behavioral theories, SAT is innovative in that it envisions health behavior as dependent on context, as well as on a continuous process of learning from sociocultural factors that can influence behavior.[21] SAT is a framework that addresses realistic and tangible factors that influence health behaviors, and by focusing research within this framework culturally responsive interventions can be designed and implemented.

Study Objective

The purpose of this study is to (1) illustrate the experiences related to HIV risk that women incarcerated in Washington State have when they are outside of the criminal justice system and

are living within their communities, (2) identify known HIV risk behaviors specific to WICJS, (3) explore intrapersonal, interpersonal, and environmental factors that influence how these women negotiate engagement in risk behaviors when they are not incarcerated and within their community, and (4) use the results of this study to create a set of recommendations for The IF Project (TIP)'s health and wellness program and the SHIELD program, two HIV-related health interventions currently being held in women's correctional facilities in Washington State.

METHODS

This study is a directed content analysis of qualitative data that Samantha Yard, PhD collected in 2011-2012. Yard conducted twenty semi-structured one-on-one interviews with incarcerated women in Washington State, ten of which were conducted with women at a county jail and the other ten at a state prison. Given the dearth of research specific to incarcerated women in Washington State, Yard employed a grounded theory approach to inductively generate hypotheses for her initial research. Yard's specific goal of conducting these qualitative interviews was to elicit personal narratives of HIV risk behavior, including narratives of HIV infection mitigation and participants' strategies for navigating concomitant risks within romantic relationships (see Appendix I for Yard's qualitative interview guide).

Ethical Approval

Yard's data collection methods received approval from the University of Washington Institutional Review Board, the Washington State Department of Corrections, King County Corrections, Seattle-King County Public Health's Research Administrative Review Committee, the U.S. Department of Health and Human Services, and a certificate of confidentiality and

security clearance was issued by the Department of Corrections and King County Corrections. The study received a Certificate of Confidentiality from the National Institute of Mental Health (MH-12-26) to insure additional confidentiality protections.

Participant Recruitment and Enrollment

Recruitment, enrollment, and data collection took place between May 26, 2011 and May 25, 2012. The study used convenience sampling, and participants were selected from two correctional sites: one Washington State women's prison and one large mixed-gender jail in King County. Participants at the prison were recruited via flyers given to them by intake nurses during the reception and orientation process when they first entered the prison. Recruitment at the jail was conducted via flyers distributed by Yard within the women's housing unit. Women who were interested in participating were instructed to write a confidential medical appointment request indicating their interest.

Once the request was received at the mental health clinic (prison location) or medical clinic (jail location), it was given to the study's researchers. Women who had not yet been released from jail were put on a call list to be brought to the medical clinic or mental health clinic for an appointment with a study interviewer. Correctional staff and parole board members were not informed about who participated in the study.

Potential participants were screened for eligibility and signed a written consent form after they were verbally guided through it to ensure comprehension. The criteria for study inclusion were that the participant be (1) female; (2) age 18 or older; (3) have had sex with a male partner at some time previously; (4) able to demonstrate an understanding of the consent information,

which was assessed through direct questioning by Yard; and (4) able to verbally communicate in English. There were no additional exclusion criteria.

Data Collection

Individual, in-depth interviews were conducted with twenty participants and lasted between 34 and 79 minutes. All qualitative interviews were conducted in-person by Yard, who at the time was a graduate student in the University of Washington's Psychology PhD program and was under the supervision of Jane Simoni, PhD. Simoni supervised Yard's training and her development of data collection methods, including a semi-structured interview guide informed by SAT that incorporated open-ended questions and follow-up probes. These questions and probes were designed to invite participants to share information and their perspective in their own words.

Interview Guide

The interview guide was designed to elicit information regarding each participant's life experiences and the context surrounding their engagement with (a) interpersonal relationships, (b) mental health, (c) sexual health, and (d) substance use. These questions and probes elicited responses specific to participants' positive and negative experiences with romantic relationships (including interpersonal power dynamics and IPV), positive and negative experiences with sex (including rape and sexual assault), decision-making concerning condom use and negotiation, decision-making around syringe use, mental health in relation to romantic and sexual practices, and substance and alcohol use in relation to romantic and sexual practices. Yard utilized this

guide to conduct the interviews, and the interviews were designed to be flexible so that the participants could share their own specific narratives in a manner that was more conversational.

Interviews

The interviews began immediately following screening and were conducted in private rooms. The interviews that took place in the prison were conducted in the on-site health care clinic so that the reason for the appointment would not be identified. The interviews that took place in the jail were conducted in a triage office, which is a private room within the facility that has no audio surveillance. Participants from the jail were provided with a food snack for completing the interview. Participants from the prison were not given any reimbursement (food snack or otherwise) due to Washington State law that prohibits any sort of incentive or payment in exchange for research participation.

Data Management and Analysis

All qualitative interviews were electronically audio-recorded, then uploaded and stored in a password-protected computer. One research assistant used the computer program Atlas.ti to transcribe all audio files verbatim while redacting identifying information. Another research assistant then listened to the audio recording while checking the transcription for errors. Yard listened and read the transcripts and corrected any discrepancies. All audio recordings were destroyed shortly thereafter (by December 2012). In order to protect the participants' anonymity, code numbers were assigned to all participants and transcriptions were password-protected.

Data analysis was managed using Microsoft Excel and matrices were generated using the transcriptions and codes. Data analysis was conducted in two phases, both of which used a

directed content analysis approach to systematically analyze and extract categories from the data.[22] Initial analysis began with generation of a list of initial codes that was derived from previous research identifying contextual HIV risk factors that impact WICJS.[23] Using these initial codes, the frequency of specific risk factors and risk variables were counted. Initial codes were categorized based on the relationships between risk factors and other variables, including general childhood-related HIV risk factors, HIV risk factors the participants' parents engaged in, sexual onset, childhood abuse, general HIV risk factors that occurred during adulthood, participants' experiences with parenthood, abuse experienced during adulthood, substance use, IDU, sexual practices, HIV-/STI-specific information, and condom use.

As the transcripts were reviewed during the initial analysis, emergent codes were added as risk factors and other variables were further explored. Emergent codes were more-detailed information related to the initial codes that were not originally accounted for and included specific information regarding condom negotiation, participants using substances as a coping mechanism, and specific locations where participants acquired clean syringes (aside from syringe exchanges). Coding was both inductive and deductive: inductive in that the interviews were semi-structured and thus required coding of latent content, and deductive in that previous research and literature helped to establish the initial coding scheme.[22]

Field notes were recorded for each transcript as a way of keeping track of supplementary information that would help refine codes and themes during the second phase of analysis. The Excel spreadsheet was used to track the frequency of HIV-related risk behaviors; the field notes were where illustrative information and quotes were managed. General information in the field notes included details regarding participants' families, sexual and romantic partners, their broader social circles, early childhood memories, feelings related to self-worth, and other general

mental health-related details. Information regarding HIV-related risk behavior included information that described the nuances involved in negotiating different HIV risk behaviors the participants engaged in (e.g. information regarding condom negotiation, how the participants' sexual behaviors varied between people they were having transactional sex with versus non-transactional sex, and examples of HIV risk behaviors spanning generations). The field notes also included examples of participants engaging in intersubjective discourse with the interviewer (e.g. giving suggestions for HIV prevention with WICJS and providing HIV-related information specific to their experiences being incarcerated).

To establish intercoder reliability, another graduate student in the University of Washington's School of Public Health coded a quarter of the interviews using the initial list of codes. Each individual coded the same five transcripts independently using the same codebook. Coders met to discuss and verify codes as well as reconcile differences in coding. After discussing those differences, a set of agreed-upon definitions for codes was established. During the second phase of analysis, transcripts were revisited to confirm previous coding and to count the frequencies of the emergent codes that were found during the initial phase of analysis. The final codes were subsequently placed into a coding scheme and were subsequently clustered into broader, unifying themes that were applicable to SAT. These themes expanded upon the prior categorization of risk behaviors and variables established during the first phase of analysis within the realm of SAT; including the interrelated characteristics within the prior categorizations and the ways in which those characterizations contextualized risk behavior.

RESULTS

Participant demographics are provided in Table 1. Interview transcripts from 20 women were included in the analyses. Participants' ages ranged from 18-50. Of the participants, 40% (n=8) were between the ages of 18-25 and 70% (n=14) identified as White. A majority of the participants had injected drugs at least once prior to incarceration (85%, n=17) and 45% had traded sex for money, illicit substances, and/or housing (n=9). Because the interviews focused more on midlife contextual influences, the data provided several examples of the multifaceted relationship between midlife contextual influences and self-change processes. Results below are organized by childhood contextual influences, midlife contextual influences, and the relationship between midlife contextual influences and self-change processes.

Early Life Contextual Influences (Table 2)

Unstable Home Environment

Several HIV risk factors and variables were present when the women in this sample were children and adolescents. Among the participants, unstable home environments were frequently characteristic of their early lives (prior to eighteen years of age). This included one or both parents using substances (n=8), a parent having been incarcerated during her childhood (n=3), a parent dying during her childhood (n=3), and/or unstable housing (e.g. foster care, being "kicked out", living in motels) (n=5).

Trauma and Abuse

A large proportion of the participants reported experiencing exposure to trauma and abuse during their early lives. The most common form of trauma was sexual abuse occurring in

early adolescence. Among the participants, 70% (n=14) of the participants had their first sexual experience between the ages of 12-16 years old. Of these participants, 78.5% (n=11) reported that their sexual experience(s) during childhood included date rape (n=5), statutory rape (n=4), and incest (n=2). Other forms of trauma included physical abuse (n=2), emotional abuse (n=3), and verbal abuse (n=2).

Substance and Alcohol Use

Several participants described substance and/or alcohol use during childhood and early adolescence. Among the participants, 45% reported having drunk alcohol before the age of 21 (n=9), 60% reported having consumed an illicit substance before the age of 18 (n=12), and 40% reported having done both before each respective age (n=8).

Midlife Contextual Influences and their Relationship with Self-Change Processes

Results specific to midlife contextual influences are provided in Tables 3-8.

Unstable Day-to Day Life (Table 3)

Several HIV risk factors and variables that were present during the participants' early lives were mirrored in their adult lives. Twenty-five percent of participants reported having previously been incarcerated at least once in their adult lives (n=5). Unstable housing was reported among 30% of the participants (n=6) and included unpredictable and volatile spaces such as motels, drug houses, and the homes of romantic partners who leveraged housing as a form of abuse. Of the 55% of participants who are parents (n=11), many reported instances of HIV risk behaviors and variables that now influence their children, such as the father of the child

having been incarcerated (n=5), unstable housing (e.g. having a family member raising the child, foster care) (n=6), and/or experiences of trauma such as physical abuse (n=1) and incest (n=2).

Mental Health **(Table 4)**

Among the participants, 60% self-reported clinical mental health diagnoses during their interview (n=12) (excluding substance and/or alcohol addiction). Of those who reported having been diagnosed with a mental illness, 66.6% were diagnosed with depression (n=8), 33.3% were diagnosed with anxiety (n=4), 25% were diagnosed with both depression and anxiety (n=3), and 25% were diagnosed with bipolar personality disorder (n=3). Other self-reported mental health diagnoses included post-traumatic stress disorder, attention-deficit/hyperactivity disorder, obsessive-compulsive disorder, and eating disorders.

Substance and Alcohol Use **(Table 5 and 6)**

Every participant had a reported history of substance use (n=20) and 75% had a reported history of alcohol use (n=15). Regarding substance use, 10% self-reported having used one substance prior to their arrest (n=2), 25% having used two substances prior to their arrest (n=5), whereas the majority (60%) used three or more substances prior to their arrest (n=12) (see Table 5). The most common substances that participants reported using were methamphetamines (n=15), heroin (n=10), marijuana (n=10), cocaine (n=8), and opiates (n=7). Thirty-five percent of participants mentioned that they have received treatment for substance or alcohol use at least once in their life (n=7), including treatment options such as outpatient treatment and Alcoholics Anonymous.

A considerable portion of the study population engaged in IDU, with 85% reportedly injecting substances such as methamphetamines, heroin, and other opiates at least once during their lifetime (n=17) (Table 6). Of the participants who engaged in IDU, 35.3% self-reported that they have been diagnosed with viral hepatitis (n=6). Many participants discussed barriers and facilitators to accessing sterile syringes for IDU, such as having access to syringe exchange programs and/or the ability to purchase clean syringes, which 41.2% reported having access to, respectively (n=7).

Oftentimes sterile syringes were not available to study participants when they were engaging in IDU, in which case they resorted to other options. Of the participants who reported engaging in IDU, 88.2% expressed knowledge regarding sterilizing previously used syringes (n=15). Many of these participants described learning about sterilizing syringes from others engaging in IDU with them. Interestingly, 55% of participants who reported engaging in IDU described having others inject them (n=11) for reasons such as not knowing how to insert the syringe and/or feeling uneasy inserting it themselves. Participants also reported sharing syringes and other forms of injection equipment (i.e. “works” such as cookers and cotton) with people with whom they were engaging in IDU with them. Of the participants who reported engaging in IDU, 82.4% reported sharing syringes (n=14) and 29.4% reported sharing works (n=5).

Multiple participants detailed the ways in which substance and alcohol use influenced intrapersonal generative capabilities such as coping skills and self-esteem. Half of the interviewed women reported using substances to temporarily numb negative feelings such as anxiety, guilt, depression, regret, and sadness and/or to ease the stress associated with life events such as breakups or births (n=10). Several participants described the difficulties of breaking the

cyclical nature of using substances and alcohol to numb negative feelings. As Participant 101 describes:

> ##101##
> You know, you can forget, so I'll do some dope, and you don't have to worry about your problems. But it doesn't take 'em away, it just covers 'em up for a minute.
>
> ##SSY##
> Mmhmm.
>
> ##101##
> Still there. (Sniff) But, yeah. It's like, "Okay, well I'm not feel good today, or I don't," you know. I've been doing drugs for a long, long time, a long time. (Overlapping speech)
>
> ##SSY##
> (Overlapping speech) Mmhmm.
>
> ##101##
> Of one sort or another.
>
> ##SSY##
> Mmhmm.
>
> ##101##
> So, yeah, they've been a big part of my life, which is sad. (Sniff) (Clunk) Hard to get away from.

Likewise, as Participant 208 describes:

> You know like that, when you're high it's easier to accept everything that's happened, it's easier to forget about it, it's easier not to miss people, it's easier not to, so and then it's like when you're not high for a while, you start to feel again, the numbness goes away, you start to realize everything you fucked up, and then that's, that's hard. And that makes you more depressed and when you're more depressed you want to use, and it's just a big roller coaster. Really is, it's harder to get out…

On an interpersonal level, substance and/or alcohol use played a role within romantic and sexual relationships for many of the participants (Table 5). Seventy percent of participants reported that their romantic partner used substances and/or alcohol (n=14) and 57.1% reported using

substances and/or alcohol with their partner (n=8). Thirty-five percent of all participants reported having sex with at least one of the drug connections (n=7) and had relationships that varied from romantic, sexual, and transactional. Sixty percent of all participants reported having sex while under the influence of an illicit substance (n=12); 40% reported having sex while under the influence of alcohol (n=8); and 30% had had both sex under the influence of an illicit substance and sex under the influence of alcohol, respectively (n=6).

Trauma and Abuse **(Table 7)**

Virtually all of the participants reported having experienced some form of abuse in their adult lives (n=19) and 25% of all participants reported experiencing multiple forms of abuse in their adult lives (n=5). Seventy percent of the study participants experienced physical abuse in their adult lives (n=14). Of the 65% of participants who reported having been physically violent in the past (n=13), 30.7% were doing it in self-defense within a physically violent relationship (n=4). Sixty-five percent of participants reported having experienced verbal abuse (n=13) and 63.1% reported experiencing emotional abuse (n=12) from romantic partners.

Seventy percent of participants reported having experienced sexual abuse in their adult lives (n=14). Half reported having experienced more than one form of sexual abuse in their adult lives (n=7) and half reported having experienced sexual abuse during their childhood and/or adolescence (n=7). Of the participants who reported experiencing sexual abuse during their adult lives, 35.7% experienced rape (n=5). Moreover, half of the participants who reported experiencing sexual abuse experienced overt sexual abuse within a romantic relationship (n=7). This ranged from romantic partners forcing participants into sex work, refusing to give

participants access to their personal money unless they engaged with them sexually, and physically harming participants if they refused to engage with them sexually.

Of the participants who experienced sexual violence, 78.5% of them reported experiencing coercive sex within a romantic relationship (n=11). This ranged from participants engaging in sexual activities with partners to avoid angering them; romantic partners ignoring participants saying "no" and continually asking until she said "yes"; romantic partners stating that it is the participant's duty within their romantic relationship to have sex with them; and romantic partners threatening to end the relationship or have sex outside of the relationship unless the participant agreed to engage.

Sex, Condom Use, and HIV/STI Testing **(Table 8)**

More broadly, participants described participating in several HIV risk factors and variables specific to sex and relationships, including having been in relationships with previously incarcerated male partners (n=11), having experienced a male partner cheating on them during their relationship (n=11), and trading sex for housing, substances, and/or money (n=9). Moreover, 35% of participants reported that they had a history of STI diagnoses (excluding hepatitis) (n=7).

With regard to HIV/STI testing, 60% of participants described getting tested when they were not incarcerated (n=12) and 45% described getting tested while they were incarcerated (n=9). Interestingly, several participants discussed the processes of negotiating getting tested along with their romantic and/or sexual partners. Forty-five percent of participants also described instances when they talked about HIV/STIs with their partners (n=9). Among participants, 20% stated that they did not discuss HIV/STIs with their partners (n=4).

Participants expressed the complex intrapersonal and interpersonal aspects of condom use as a form of prevention. Sixty percent of participants discussed the desire to use condoms to prevent HIV/STI transmission (n=12). Despite this, only one participant reported that they always used condoms during sexual activity. Eighty-five percent of participants reported that they sometimes used condoms (n=17) and 10% never used condoms (n=2). Moreover, several participants described how their use of condoms changed as they grew older. Among the participants, 35% discussed the fact that they did not use condoms when they were younger (n=7).

For participants who reported sometimes using condoms, multiple factors influenced their choice about whether to use them. This included the nature of the relationship they had with the person with whom they were having sex with (e.g. romantic, sexual, or transactional). Forty percent of participants described relationships they had where they used condoms early in the relationship but later discontinued (n=8). In addition, access to condoms oftentimes played a role in participants' decision to use condoms. Twenty-five percent of participants described an instance when they did not use condoms because neither she nor her partner had one (n=5). Discussing and negotiating condom use with partners was also a factor that influenced participants' choice to use condoms. Participants described instances of not wanting to interrupt the moment to find and put on a condom (n=4), not using condoms because she preferred not to (n=3), not using condoms because her partner preferred not to (n=9), and not using condoms because neither she nor her partner mentioned using them (n=4).

DISCUSSION

This directed content analysis explored the narratives of incarcerated women in Washington State to better understand the intrapersonal, interpersonal, and environmental factors that influence how they negotiate engagement in HIV risk behaviors when they are outside of the criminal justice system. The goals of the analysis were to identify known HIV risk behaviors that impact WICJS in Washington State and to better understand the sociocultural and psychosocial contextual influences that inform these risk behaviors. The qualitative methodology was conducted in a manner that allowed participants to elaborate on the parameters of and the nuances within their participation in HIV risk behaviors and do so in their own words. The results suggest that engagement in HIV risk behaviors for WICJS is not static; it is dynamic and multifactorial, oftentimes occurring in concurrence and spanning throughout the life course.

Major findings of this study include childhood and midlife contextual influences that are consistent with current literature regarding HIV risk behavior among WICJS. Childhood contextual influences such as the death of a parent,[9] family history of substance use,[6] and histories of childhood/adolescent physical, verbal, and sexual abuse, [6, 8, 9] were present within the study population. Moreover, several of the midlife contextual influences present in the study population are similar to findings within published reports related to WICJS and HIV risk behavior, such as poor mental health including depression and anxiety,[5, 9] substance use (especially IDU),[1, 8, 10, 24] poor social support systems,[4, 6, 9] and experiences with IPV.[4, 6, 24] Despite the disproportionate impact that HIV has on WICJS, there is currently limited research focusing on this marginalized population. These findings help corroborate current research and can help to better inform interventions aimed at reducing this significant public health issue.

With regard to midlife contextual influences impacting self-change processes, findings within this study are consistent with prior research detailing these phenomena. This includes research describing intergenerational cycles of violence and HIV risk behavior, such as childhood abuse leading to experiences of IPV later in life.[6, 8, 11, 24] Other HIV risk behaviors such as substance use, alcohol use, and unstable housing spanned through the life course of participants as well, and for the participants who were parents many of these same risk factors impacted their children. The findings of this study are also consistent with research analyzing how substance use influences coping skills and self-esteem, such as the use of substances to temporarily numb negative feelings and/or to ease stress, which in turn can impact HIV risk behavior by impairing abilities to assess HIV risk within a given situation and/or interfering with decision-making around HIV prevention practices.[6, 24, 25] This is especially pertinent, as several of the study participants noted the difficulties in breaking the cyclical nature of substance use as a coping mechanism. To improve targeted HIV intervention opportunities for WICJS in Washington State, future research should analyze these factors within the participants' life stories to better detail and understand the associations between midlife contextual influences and how they impacted self-change processes related to these HIV risk behaviors.

In regards to IDU and HIV risk behavior, 55% of participants had others inject them (n=11) for reasons such as not knowing how to insert the syringe and/or feeling uneasy inserting it themselves. These reasons were consistent with those found in recent a qualitative study that explored the social, contextual, and behavioral dimensions of women's IDU practices.[26] The study found that women who self-inject chose safer IDU practices and felt they had the capacity and power to make these decisions; women who were dependent on others to inject them described feeling a lack of agency which led to their engaging in IDU practices that increased

HIV risk, such as sharing syringes and works.[26] The results of this study indicate that the multifaceted interpersonal aspects that intersect with IDU make it one of the more urgent HIV risk behaviors to address among WICJS in Washington State.

Among the study population, midlife contextual influences regarding sex-related HIV risk behaviors especially paralleled prior research regarding HIV risk behavior and WICJS. This included having previous sexual and/or romantic relationships with incarcerated male partners,[6] exposure to STIs,[1, 6, 7, 8] multiple/concurrent casual sex partners,[7, 8] casual condomless sex partners,[7] having sex under the influence of substances,[6] and a history of trading sex.[7, 24] Given that 78.5% of the participants who had experienced sexual abuse experienced coercive sex (n=11), a potential avenue for future research regarding Washington State WICJS could be to analyze the relationship between coercive sex, self-change processes, and HIV risk.

The complexities involved with condom negotiation found within the study population correspond with previous research concerning condom negotiation and self-efficacy for WICJS, such as using condoms early on in a relationship and later discontinuing, feeling uncomfortable interrupting the moment to find and put on a condom, and condom use being determined based on their partner's preference rather than their own.[6, 25, 27] Additional research focusing on condom use and negotiation practices among Washington State WICJS would be especially beneficial for future intervention strategies, as condoms are a low-cost, efficacious, and are a widely available method of reducing HIV risk.[27] Future studies regarding Washington State WICJS should analyze the connection between generative capabilities (such as self-worth) and its effect on condom use,[6, 25] as this was a common theme among the study population.

A major strength of the data used for this content analysis is that using SAT as a framework to guide the interviews allowed for life course narratives to emerge. Indeed, using

SAT as a theoretical framework contributed to the growing field of research using SAT for analyzing HIV risk behavior and allowed for a more comprehensive exploration of the interplay between individual, social, and contextual factors that influence HIV risk behaviors among incarcerated women in Washington State. Utilizing a life course narrative approach addresses current limitations of WICJS-specific HIV behavioral research, which typically focuses on either childhood or adulthood to examine HIV risk behaviors.

In addition, this approach provided opportunities for intersubjective discourse to emerge, which has the potential to improve researchers' comprehension of the phenomenon being studied.[9] This approach also has the potential to positively impact study participants, as it promotes a more equitable exchange of information between researchers and participants. As Sprague, Scanlon, et al. (2017) described regarding their life course narrative-based qualitative study regarding WICJS and HIV risk behavior:

> [The life course narrative approach] offered [study participants] the advantage of reflecting on their life events in ways that appear to be atypical for this population, while feeling supported to do so…The women told us directly that they benefitted from sharing their life histories with us, an engaged and compassionate audience, who sought only to understand and chronicle their experiences. This suggests…that these methods can generate bidirectional learning and value for participants, as well as researchers, in ways that have been documented but require further study.[9]

In regards to intersubjectivity, many of the participants 1) expressed interest in learning more about the research process, 2) used the opportunity to provide suggestions for HIV risk reduction strategies (e.g. emphasizing the need for increased street outreach and syringes being widely available for purchase at retail stores), 3) expressed their hope that their participation in the study would help contribute to WICJS/HIV-related literature (e.g. "As long as it helps, I mean it might help someone in the- I mean cause my sister, you know, she went through a lot and so if anything can help, you know, just teach a younger child or teach even an older one so they don't

have to go through things that I've seen or that my sisters gone through"), and 4) described participating in the study as useful for their self-reflection processes. In regards to the fourth point, multiple participants expressed an interest in receiving the transcript from their interview for further self-reflection. One participant noted that, "It's actually kind of nice to talk to somebody about it, cause then when my words are spoken then it makes it more powerful in my head and I can, I can say okay I realize this is what's going on so let's do something different. Or let's- it helps me" (see Appendix II for a longer quote from Participant 207 illustrating how intersubjective discourse during interviews impacts desire to increase self-reflection processes). Future studies should use this qualitative data to analyze this phenomenon more closely and explore the relationship between research participation, intersubjective discourse, and how the information generated from this can improve intervention strategies in Washington State.

LIMITATIONS

While this study has several strengths, there are some considerations that should be taken into account when evaluating the results. One limitation is that the study population was small and was self-selected and therefore the results are not necessarily generalizable to all WICJS locally or nationally. Indeed, results may not fully represent the needs of WICJS of various racial and ethnic backgrounds and of different ages, as a large portion of the study participants were White (n=14) and between the ages of 18-25 (n=8) (see Table 1). Despite these limitations, the racial and age demographics of the study participants is similar to the demographic distribution of people acquiring and living with HIV in Washington State and therefore the results may still be useful for addressing the contextual needs of WICJS-specific HIV interventions in Washington State.[28]

The intention of the exploratory qualitative study analyzed for this content analysis was to address HIV risk behaviors of WICJS living in Washington State. Despite the fact that many of the results of the content analysis mirror HIV risk behaviors found among this population in other regions of the United States, the cross-sectional and retrospective nature of this data only provides a snapshot of the multifaceted, oftentimes concurrent HIV risk behaviors that impact WICJS across the United States. It is important to note, however, that retrospective qualitative studies of WICJS have been shown to generate reliable information for assessing HIV risk behaviors that impact this population,[6, 24, 27] especially as the literature regarding HIV risk behaviors for this understudied population is sparse. Despite the complexities involved with studying marginalized communities such as WICJS, future studies should aim to include WICJS study participants after their release, as this data will more directly align with contemporaneous factors influencing HIV risk behavior.

One limitation of the study design and content analysis is that it did not address the HIV behavioral risks WICJS participate in while they are incarcerated, another important factor in reducing HIV risk within this population. The choice to not include this information was purposeful, as much of the HIV risk behavior WICJS may engage in while incarcerated is illegal and/or against the prison rules and policies. Therefore, the accuracy of information shared around these behaviors is often inaccurate, since many of the women may not feel at liberty to disclose the truth. As well as this, the researchers did not want to place participants in precarious positions where disclosing sensitive information could lead to punitive consequences (Lara Strick, DOC Infectious Disease Specialist, email communication, August 20, 2018). To collect data specific to HIV risk behaviors WICJS participate in while they are incarcerated, future retrospective studies should aim to include WICJS study participants after their release.

In addition, the methods used to conduct the interviews should be considered when assessing the results of this content analysis. With qualitative methodology, social desirability is a potential factor that may influence the self-reported responses that participants give. Yard sought to address this issue by emphasizing at the beginning of each interview that "there were no right or wrong answers," that the goal of the interview was to hear participants' "thoughts, experiences, and perspectives" regarding their emotions, past romantic and sexual relationships, and substance use, that the purpose of the interview was not for the interviewer to pass judgment on the participant, and that the participant was not required to answer any questions she was not comfortable discussing.[21] Despite these precautions, the desire to give socially acceptable responses may have made study participants reluctant to report participating in risk behaviors or divulge certain aspects of the risk behaviors they were describing.

Despite the positive aspects of the "free-form storytelling and dialogue" nature of life course narrative approaches,[9] this methodology introduces difficulties for conducting a content analysis. Because participants took a more active role in guiding the interviews, inconsistent reporting for many of the risk behaviors identified within the sample occurred and thus may be underreported. For example, opt-out HIV testing is available at entry to prison in Washington State with an uptake among women of 95% or more,[8] but only 45% of the participants reported having been tested while incarcerated (see Table 8). To address this limitation to the extent possible, data analysis was conducted in two labor-intensive phases, both of which used a directed content analysis approach to systematically analyze and extract categories from the data and minimize missed content.[22] With the initial analysis, a start list of initial codes was derived from previous research and frequency was counted. Emergent codes of risk factors and variables were added throughout the initial analysis and were confirmed through a second phase of

analysis. However, despite the content analysis-related methods that were put in place to address the issue described, the unstructured nature of the interviews required that latent content be coded via relational analysis, which is subject to increased error.[23]

It is important to emphasize that these limitations withstanding, the purpose of this directed content analysis was not to identify causal behavioral risks; but rather to identify known risk behaviors in order to better understand the sociocultural and psychosocial experiences of incarcerated women in Washington State via the exploration of intrapersonal, interpersonal, and environmental factors that influence how they negotiate engaging in HIV risk behaviors. Despite important limitations, research focusing on the unique interplay between WICJS's HIV risk behaviors and the contexts in which they unfold is limited and thus studies such as this add depth and nuance to literature aiming to better address the needs of this marginalized and at-risk population.

INTERVENTION RECOMMENDATIONS

The findings of this study can help to improve current intervention strategies being implemented within women's correctional facilities in Washington State, especially with respect to addressing HIV risk behaviors such as trauma and abuse, IDU, condom negotiation skills, and HIV risk behaviors throughout the life course. A systematic review of thirty-seven HIV- and STI-specific interventions for criminal justice-involved populations worldwide found that there were only twelve targeted specifically to women.[29] Within the United States, only 10% of state and federal prisons and 5% of jails offer HIV- and/or STI-specific prevention programs.[6] Despite several barriers to rehabilitation that exist for incarcerated women, correctional facilities have been shown to be effective environments in which to conduct HIV prevention interventions with

WICJS, as many WICJS view correctional facilities as a place to focus on self-reflection and self-improvement, heal from past trauma, access resources unavailable outside of the correctional setting (e.g. counseling services and educational opportunities), and engage in positive behavior change.[30]

In order to improve health behavior and outcomes of WICJS, as well as to interrupt the oftentimes cyclical nature of engagement with the criminal justice system and reduce healthcare costs within correctional facilities, it is imperative that researchers, public health practitioners, correctional facilities staff members, and community-based organizations (CBOs) create effective public health interventions that address the multifaceted nature of HIV risk behavior within this underserved, high-impact population. In Washington State, TIP's health and wellness program and the SHIELD program are two public health interventions implemented for women in correctional facilities. While each of these interventions address various aspects of HIV risk behavior and the sociocultural and psychosocial contextual influences that impact them, the findings of this study indicate additional information and practices that can be included to better address the unique needs of this population.

The IF Project (Table 9)

Overview

TIP is a collaborative partnership between law enforcement, WICJS, and CBOs who work together to prevent and reduce incarceration and recidivism via youth programming, community outreach, reentry mentoring, writing workshops, and health and wellness programming.[31] Their program for incarcerated women in Washington State has existed at the

Washington Corrections Center for Women (WCCW) in Gig Harbor, Washington for the past ten years.

The eleven-week health and wellness program runs four times a year in WCCW and usually has about fifteen participants in each cohort.[31] It was created in collaboration with Women's Village, a leadership group of incarcerated women at WCCW who work to create a healthier atmosphere within the facility.[31, 32] Women's Village conducted a survey within WCCW to determine which topics would be most relevant for the incarcerated women at WCCW attending the program. Topics include communication, health and nutrition, violence prevention and conflict resolution, parenting, domestic violence, life planning, goal setting, self-esteem, personal empowerment, and coping skills.[31]

With regard to HIV prevention, for the past six years a representative from BABES Network-YWCA (BABES)—a Seattle-based CBO that provides peer support for women living with HIV—comes to one session each quarter and shares their personal experiences living with HIV with the participants. During this session, the BABES' staff member focuses on HIV transmission, resilience, empowerment related to sharing one's story, and the similarities between HIV stigma and stigma related to having been incarcerated (Nicole Price, Program Manager of BABES, oral communication, July 12, 2018).[33]

Assessment and Recommendations

TIP's health and wellness program has many positive aspects, as well as areas which can be updated to be more HIV-specific. One of the program's strongest aspects is its emphasis on equity via centering stakeholder engagement in determining and developing the session topics. While the discussion of HIV is limited to only one session, the utilization of BABES staff

members' expertise in HIV prevention education is valuable. Regarding the connection between SAT and HIV prevention, TIP's eleven-week health and wellness program addresses important contextual influences related to HIV risk found among the study participants, such as IPV. While TIP's program was not informed by SAT, the content of the sessions helps participants strategize mitigating HIV risk within SAT's self-change processes, such as teaching about social interaction processes like communication skills and conflict resolution, as well as generative capabilities such as life planning, goal setting, self-esteem, personal empowerment, and coping skills. It is, however, unclear how directly mental health is addressed within sessions that concentrate on self-change processes. This may be a limitation of the intervention, as participants with poor mental health may face added challenges to their ability to engage in these processes. TIP's program can improve by addressing the question of how poor mental health can negatively impact self-change processes and by providing strategies participants can use to mitigate the barriers that poor mental health can create.

While TIP's program provides participants with critical health information and communication skills, the program's focus is broader health and wellness and therefore incorporates HIV into only one of their sessions. HIV only being discussed in one session may indicate that TIP's program is not the most effective intervention available to address HIV risk behaviors that impact WICJS. However, this approach could also be beneficial and may facilitate the prevention of HIV risk behavior among WICJS, as HIV risk behavior is multifactorial in nature and oftentimes occurs in concurrence with other adverse health risk behaviors. By presenting this information in a context that is not HIV-specific, TIP's health and wellness program has the opportunity to discuss issues that touch on adverse health risk behaviors that impact WICJS that coincide with HIV risk behavior as well. TIP's broader approach to

addressing health and wellness also avoids the stigma associated with participating in an HIV-specific intervention, which may negatively impact a potential participant's decision to engage in the intervention.

If TIP's program were to more directly focus on reducing HIV risk behavior among its participants, the program could address HIV risk behaviors and other adverse health behaviors that impact WICJS that the program currently does not address, such as substance use, alcohol use, condom use, coercive sex, and the sociocultural and psychosocial contexts that influence these risk behaviors. As noted, of the study participants who experienced sexual violence, a staggering number of participants reported experiencing coercive sex within a romantic relationship (78.5%, n=11). One recommendation for TIP's health and wellness program is to address self-change processes their participants can engage in around coercive sex within their session dedicated to domestic violence.

In regards to parenting as a session topic, TIP's health and wellness program has a unique opportunity to discuss the connection between intergenerational cycles of violence and adverse health risk behavior, especially concerning HIV risk behavior.[6, 9, 11] Indeed, as Sprague, Scanlon, et al. (2017) note:

> For us, as researchers, [our study] opened new ways of learning and understanding the experiences of women's marginality on multiple levels that included the family and social settings as interrelated sites of risk and harm over the life course: first as children located within intergenerational cycles of violence, then as adolescents who established patterns to cope with their untreated trauma, then as partners experiencing abuse while seeking love and affection, and in older age as women experiencing violent revictimization and repeated habitual patterns of substance use and incarceration.[9]

As the study results showed, for many of the participants trauma and abuse was an HIV risk factors that was present in both their childhood and their adult lives. Other HIV risk behaviors such as substance use, alcohol use, and unstable housing were present as well. For the

participants who were parents, many of these same HIV risk factors impacted their children. TIP's program could benefit from highlighting the intergenerational impact of these risk factors across the participants' and their children's life course and from underscoring the health benefits of interrupting these patterns of intergenerational trauma.

SHIELD Program (Table 10)

Overview

Since 2014, Hepatitis Education Project (HEP), a Seattle-based CBO whose focus is in hepatitis education, has overseen the Self-Help in Eliminating Life Threatening Diseases (SHIELD) Program for the DOC, an evidence-based peer education program that trains incarcerated persons to educate people within their social networks about HIV and viral hepatitis risk prevention. Currently the SHIELD is up and running at WCCW and Stafford Creek Corrections Center (SCCC) in Aberdeen, Washington. Developed by researchers at Johns Hopkins Bloomberg School of Public Health using funds from the Centers for Disease Control and Prevention (CDC), SHIELD is an outcomes-based intervention that was originally developed to train IDU or people who are socially connected to IDU to perform HIV-specific peer outreach with the goal of decreasing HIV risk and transmission.[34, 35]

The program was part of the CDC's Diffusion of Effective Behavioral Interventions (DEBI) Project, whose goal was to bring scalable, evidence-based HIV prevention interventions to CBOs and state and local health departments in order to enhance their capacity to implement interventions. With DEBIs, interventionists are permitted to modify the intervention for different settings as long as they include the Core Elements of the DEBI to ensure that measurable

outcomes aren't impacted. DOC and HEP adapted SHIELD to be more applicable within a correctional setting and to include viral hepatitis risk reduction in addition to HIV.[34, 35]

SHIELD currently operates twice a year at WCCW and SCCC. The program includes six 1.5-2 hour sessions that occur three times per week for two consecutive weeks. Any person incarcerated within these facilities can participate in the program, which typically has a cohort of 4-12 participants. In late 2017, DOC and HEP expanded its scope by transitioning to a peer-led program where facilitators are incarcerated persons who have previously participated in SHIELD. In the near future HEP will be implementing optional booster sessions for former SHIELD participants. DOC and HEP's goal is to eventually have the program be available in all prisons throughout Washington State (Lara Strick, DOC Infectious Disease Specialist, oral communication, June 29, 2018; Mandy Altman, HEP Correctional Health Program Manager, oral communication, July 7, 2018).[34, 35]

The goals of SHIELD are to educate incarcerated persons about HIV, viral hepatitis, and communication skills; to reduce participants' HIV/viral hepatitis risk behaviors; and to encourage and empower participants to conduct outreach and share HIV/viral hepatitis risk reduction information with people in their social networks.[34] goals are achieved via skills-building activities with participants, including HIV/viral hepatitis risk reduction skills and communication skills. SHIELD provides an overview for HIV/viral hepatitis transmission, elaborates on risk behaviors such as sex, IDU, drug splitting, and tattooing, and explores harm reduction strategies related to these behaviors.[34]

SHIELD is an interactive program and sessions include facilitated discussion, demonstrations, individual work, group work, games, skills building activities, and role-playing HIV/viral hepatitis risk-related prison scenarios. Participants identify a partner who is not

participating in the program with whom to practice communication skills, including active listening, confidentiality, and peer education about HIV/viral hepatitis transmission risks and harm reduction. After each session, participants are assigned homework that centers on their practicing these skills with their partners.[34]

SHIELD teaches participants PEER communication skills to use when they are engaging in community outreach: "Pick the Right Place and Time," "Evaluate Their Situation," "Explore Safer Options," and "Resources and Referrals." The goal of PEER communication skills is for participants to learn how to assess a situation in order to optimize the likelihood that the person they're speaking with will be receptive to the information and absorb it. When teaching about risk behaviors, SHIELD uses a Risk Reduction Ladder approach: participants discuss which risk behaviors are highest on the ladder (e.g. highest risk), which are the lowest on the ladder (e.g. lowest risk), and where other risk behaviors fall on the rungs in-between (e.g. assessing the level of risk for each behavior). Facilitators teach about each topic and the group compares and contrasts these different risk behaviors (e.g. for a group discussion concerning condomless anal sex, participants may assess where it would fall on the ladder and compare it to where other behaviors fall on the ladder, such as lower risk activities like condomless oral sex). The goal of this approach is to help participants visualize HIV/viral hepatitis risk so that they can better understand the concrete ways by which they can reduce potential exposure and educate others.

Assessment and Recommendations

DOC and HEP's SHIELD program is effective in addressing many of the most pressing risk behaviors described by the study participants. A 2018 program evaluation of SHIELD's pre/post test data from 2014-2018 showed that WCCW participants engage in many of the risk

behaviors described in the survey, such as infrequent condom use for vaginal sex with their main partner (61% indicated "never" and 26% indicated "less than half the time), infrequent condom use for anal sex with their partner (67% indicated "never" and 24% indicated "less than half the time"), IDU (45%), sharing syringes/works directly after someone's use (36%), and using syringes/works that others have used in the past (58%).[35] SHIELD's focus on providing harm reduction tools and strategies that are more easily accessible to participants is an effective way to reduce HIV/viral hepatitis risk, especially because the tools and strategies they provide include ones that are available within the correctional setting (e.g. cleaning works with cold water) as well as those that are available outside of it (e.g. information about syringe exchanges and sexual health clinics they can access once they are released).[34]

While SHIELD was not informed by SAT, the theoretical frameworks it utilizes complement the framework of SAT in many ways. SHIELD's use of Cognitive Dissonance Theory also impacts self-change processes, as peer educators may modify their own engagement in HIV risk behaviors to increase consistency with the practices they are teaching others to follow.[34] The program also employs Social Influence Theory to utilize the potential it has to impact not only the lives of the peer educators, but also those around them: "as social network members observe the safer behaviors of peer educators (who they perceive as similar to themselves) they may be influenced to change their own risky behaviors."[34]

In regards to self-change processes, SHIELD's use of Social Cognitive Theory provides peer educators with "psychosocial cognitive skills training to reduce HIV/viral hepatitis risk behaviors and the opportunity to practice their skills to increase self-efficacy."[34] These psychosocial cognitive skills positively impact SAT's self-change processes: SHIELD's curriculum has the potential to improve generative capabilities among its participants by

providing knowledge and fostering skills that empower peer educators to 1) know how to recognize the HIV risk behaviors in which they engage, and 2) increase self-efficacy to choose safer sex and safer injection practices. Moreover, the program's curriculum empowers participants by strengthening their self-assurance in both their communication skills and in their competence to teach others within their social networks—both inside and outside of the correctional setting—what they have learned concerning safe practices. Social interaction processes and social support networks have the potential to be positively changed through improved communication skills, such as through reducing stigma through the normalization of discussing HIV risk and prevention.

One recommendation for improving SHIELD is for DOC and HEP to help enable peer facilitators to conduct the program more regularly. The findings of the 2018 program evaluation showed that less than 4% of people living at WCCW and SCCC have graduated from SHIELD. Research has shown that there are many advantages to using peer-based health interventions,[36, 37, 38, 39, 40, 41] and with the recent adoption of a peer-led model, the possibility of having SHIELD held more frequently is an option worth exploring. With regard to IDU, there is a gap in SHIELD's curriculum concerning the discussion of self-injection as opposed to reliance on others for injecting. SHIELD should include this concern in its curriculum by adding it in the IDU-specific Risk Reduction Ladder and by creating a role-play scenario that addresses IDU-related power dynamics and how they might negatively influence drug use and injection practices.

Similarly, it would advance the program's goals if SHIELD were to incorporate some of the condom negotiation-related findings of this study into their role-play scenarios. SHIELD's current condom negotiation role-play scripts include scenarios that address partner preference for

condomless sex as well as condom failure (e.g. condom breaks, condom is too small, and condom causes an allergic reaction).[34] Incorporating scenarios that address some of the findings of this study—including using condoms early in a relationship but later discontinuing, not having condoms readily available, not wanting to interrupt the moment to find a condom, and not using condoms because neither partner mentioned them—would allow SHIELD participants to discuss real-life barriers that other women within the same population experienced and negotiation skills to mitigate HIV risk.

CONCLUSIONS

The findings of this study have important implications in better understanding HIV risk behaviors that impact Washington State WICJS within intrapersonal, interpersonal, and environmental spheres outside of the criminal justice system. Many of the findings of this study are similar to those found in current literature regarding WICJS and the myriad of HIV risk behaviors that impact their lives. The findings of this study also suggest that WICJS's engagement in HIV risk behaviors is multifaceted and occurs throughout the life course.

Content analyses like this study provide valuable insight into HIV risk behavior via the systematization of complex qualitative data.[23] Indeed, while qualitative research oftentimes provides richer, more nuanced information regarding HIV risk behavior, the complex nature of this type of data can make the identification of key information cumbersome. Because this study quantifies meaningful qualitative data, Washington State public health practitioners, researchers, and policymakers can use this content analysis to better understand the unique needs within this marginalized and vulnerable population and improve HIV prevention strategies. Future studies specific to Washington State WICJS should expand upon this directed content analysis and

further analyze the participants' narratives to identify the relative significance they placed on each of the HIV risk factors they engaged in.

Because this study provides insight into the complex nature of HIV risk behavior among WICJS in Washington State, it has the potential to better inform the development of intervention strategies that address the HIV prevention needs within this at-risk population. Incorporating the findings of this study into TIP's health and wellness program and the SHIELD program provides an opportunity to improve outcomes for multiple HIV risk behaviors**,** including trauma and abuse, IDU, condom negotiation, and HIV risk behaviors that occur throughout the life course. Future WICJS-related HIV interventions in Washington State should seek to address the interplay between substance use and intrapersonal generative capabilities such as coping skills and self-esteem, as this was seen among many of the participants who used substances to temporarily numb negative feelings and/or to ease stress.

In order for future practice and policy to address the specific needs of WICJS, multidisciplinary, longitudinal research efforts and cost-benefit analyses are needed to assess the benefits of potentially including HIV prevention interventions with multiple intervention components in Washington State correctional facilities, including prevention case management, group therapy, and motivational interviewing.[42, 43] Adopting aspects of Providing Opportunities for Women's Empowerment, Risk-Reduction, and Relationships (Project POWER)—a CDC-funded, evidence-based HIV prevention intervention for WICJS—into intervention strategies in Washington State could better address the specific environmental contexts that impact WICJS's HIV risk behaviors. More specifically, Washington State correctional facilities could expand upon their current intensive reentry support for WICJS living with HIV and incorporate Project POWER's focus on reentry for WICJS at risk of HIV, especially in relation to structural

contextual influences that impede WICJS's ability to engage in HIV risk prevention, such as employment and housing.[30, 44] Moreover, research providing additional insight into the timing of interventions could help public health practitioners better understand how to more effectively mediate or interrupt HIV risk among younger women populations in Washington State at risk of becoming criminal justice-involved, thus facilitating prevention earlier in the life course and potentially stemming intergenerational trends in pervasive HIV risk behavior.[24] The findings of this study can help shape and facilitate policy and intervention efforts such as these, as they provide formative insight into HIV risk behaviors that occurred throughout the life course of WICJS living in Washington State.

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TABLES

Table 1. Sociodemographic Characteristics (n=20)	*n*	(%)
Age:		
18-25	8	(40%)
26-33	4	(20%)
34-41	4	(20%)
Over 42	4	(20%)
Race/Ethnicity:		
White	14	(70%)
Black	3	(15%)
Latino	2	(10%)
Native American	1	(5%)

Table 2. Early Life Contextual Influences (n=20)	*n*	(%)
Unstable Home Environment:		
One or both parents using substances	8	(40%)
Parent having been incarcerated during her childhood	3	(15%)
Parent dying during her childhood	3	(15%)
Unstable housing	5	(25%)
Trauma and Abuse:		
Physical abuse	2	(10%)
Verbal abuse	3	(15%)
Sexual abuse	11	(55%)
Date rape	5	(25%)
Statutory rape	4	(20%)
Incest	2	(10%)
First sexual experience between 12-16 years old	14	(70%)
Substance and alcohol use:		
Drank alcohol before 21 years old	9	(45%)
Consumed an illicit substance before 18 years old	12	(60%)
Both	8	(40%)

Table 3. Unstable Day-to-Day Life (n=20)	*n*	(%)
Previously incarcerated at least once during adulthood	5	(25%)
Unstable housing	6	(30%)
Parenthood	11	(55%)
Father of the child having been incarcerated	5	(25%)
Unstable housing	6	(30%)
Physical abuse	1	(5%)
Incest	2	(10%)

Table 4. Mental Health (n=20)	*n*	(%)
Self-reported clinical mental health diagnoses	12	(60%)
Depression	8	(66.6%)
Anxiety	4	(33.3%)
Depression and anxiety	3	(25%)
Bipolar disorder	3	(25%)

Table 5. Substance Use (n=20)	*n*	(%)
Substance use	20	(100%)
Methamphetamines	15	(75%)
Heroin	10	(50%)
Marijuana	10	(50%)
Cocaine	8	(40%)

Opiates	7	(35%)
Number of substances used		
One substance	2	(10%)
Two substances	5	(25%)
Three substances	3	(15%)
Four substances	4	(20%)
Five substances	5	(25%)
Alcohol use	15	(75%)
Treatment for substance or alcohol use	7	(35%)
Interpersonal aspects of substance/alcohol use		
Romantic partner used substances and/or alcohol	14	(70%)
Used substances and/or alcohol with their partner	8	(57.1%)
Had sex with at least one of the drug connections	7	(35%)
Had sex while under the influence of an illicit substance	12	(60%)
Had sex while under the influence of alcohol	8	(40%)
Had both sex under the influence of an illicit substance and under the influence of alcohol, respectively	6	(30%)

Table 6. IDU (n=20)	*n*	(%)
IDU	17	(85%)
Hepatitis	6	(35.3%)
Access to syringe exchange programs	7	(41.2%)
Ability to purchase clean syringes	7	(41.2%)
Syringe cleaning knowledge	15	(88.2%)
Had others inject them	11	(55%)
Shared syringes	14	(82.4%)
Shared works	5	(29.4%)
Used substances to numb feelings	10	(50%)

Table 7. Trauma and Abuse (n=20)	*n*	(%)
Experienced some form of abuse during adulthood	19	(95%)
Experienced multiple forms of abuse during adulthood	5	(25%)
Types of abuse		
Physical	14	(70%)
Had been physically violent in the past	13	(65%)
Were physically violent out of self-defense within a physically violent relationship	4	(30.7%)
Verbal abuse	13	(65%)
Emotional abuse	12	(63.1%)
Sexual abuse	14	(70%)

Experienced more than one form of sexual abuse during adulthood	7	(50%)
Experienced sexual abuse both during adulthood and during their childhood/adolescence	7	(50%)
Rape	5	(35.7%)
Sexual abuse within a romantic relationship	7	(50%)
Coercive sex	11	(78.5%)

Table 8. Sex, Condom Use, and HIV/STI Testing (n=20)	*n*	(%)
Sex with both men and women	6	(30%)
Male partner was previously incarcerated	11	(55%)
Male partner cheated during relationship	11	(55%)
Trading sex	9	(45%)
History of STI diagnosis (excluding hepatitis)	7	(35%)
HIV/STI testing		
Tested when they were not incarcerated	12	(60%)
Tested while they were incarcerated	9	(45%)
Talked about HIV/STIs with their partners	9	(45%)
Did not talk about HIV/STIs with their partners	4	(20%)
Condom use		
Discussed the desire to use condoms to prevent HIV/STI transmission	12	(60%)

Always used condoms	1	(5%)
Sometimes used condoms	17	(85%)
Never used condoms	2	(10%)
Did not use condoms when they were younger	7	(35%)
Used condoms early in the relationship but later discontinued	8	(40%)
Did not use condoms because neither she nor her partner had one	5	(25%)
Did not wanting to interrupt the moment to find and put on a condom	4	(20%)
Did not using condoms because she preferred not to	3	(15%)
Did not using condoms because her partner preferred not to	9	(45%)
Did not use condoms because neither she nor her partner mentioned using them	4	(20%)

Table 9. The IF Project

Positive aspects of intervention • Collaborative process that promotes equity by emphasizing stakeholder engagement. • The utilization of BABES' expertise in HIV prevention education. • Advertised as a health and wellness intervention, thus	Ways intervention can improve in addressing HIV risk behavior • Address multifactorial HIV risk behaviors such as substance use, alcohol use, condom use, and coercive sex. • Directly address how mental health can negatively impact self-self change processes and provide strategies participants can use to

reducing the stigma related to participating in an HIV-specific intervention. • Addresses important sociocultural and psychosocial aspects related to SAT and HIV, such as contextual influences and self-change processes.	mitigate the barriers poor mental health creates. • Discuss the connection between intergenerational trauma and health risk behavior; especially in regards to HIV risk behavior.

Table 10. The SHIELD Program	
Positive aspects of intervention • Effective in addressing many of the most pressing risk behaviors described by the study participants, including infrequent condom use, IDU, and sharing syringes/works. • Provides easily accessible harm reduction strategies, including ones available within the correctional setting and outside of it. • Addresses important aspects of SAT's self-change processes via its theory-based framework.	Ways intervention can improve in addressing HIV risk behavior • DOC and HEP help to enable peer facilitators to conduct SHIELD more regularly. • Include the issue of self-injection vs. reliance on others for injecting in its curriculum. Add this issue in the Risk Reduction Ladder and in a role-play scenario. • Incorporate some of the condom negotiation-related findings of this study into their role-play scenarios.

APPENDIX

I. Interview guide for qualitative interviews.

1) Introduction (2 minutes)

Thank you for being in the study. This interview may be different than others you might have done in the past. I do not have any answers in mind to the questions that I am asking. I want you to tell me your thoughts and experiences from *your* perspective. We'll be talking about your emotions, your past romantic relationships, your sexual experiences, and your and your partners' use of drugs and alcohol. This is very personal information, and you can refuse to answer any question you wish, but I would appreciate it if you could be as honest as possible. I'm not here to judge you; I am only interested in learning from your experiences.

2) Opening (rapport-building) (3 minutes)

To start, I'd just like to get to know you a little.

Where are you from? Do you have any family? Kids? What do you enjoy doing? Is this your first time being in a research study?

3) Relationships: General (15-20 minutes)

Now I'd like to talk about your experiences in relationships with men.

Can you describe the different types of relationships you have been in? How would you describe the nature of that relationship to a friend?

Thinking about your [most important/most recent/longest] romantic relationship… how did you usually spend time together? What kinds of things did you do together? Tell me about a time when you [did that]?

What made you want/like to be with him?
What made you not want/like to be with him?

Possible Follow-ups:

- When did you get along well? When did you fight? What did you fight about?
- Did either of you ever get physically aggressive with the other person? Tell me about a specific time when that happened.
- Did either of you ever say things that hurt or scared that other person? Tell me about a specific time when that happened.

What was it like to have sex with [that partner]?

Possible Follow-ups:

- How did sex between you get started usually? What would happen if one of you didn't feel like having sex? Did it matter who wanted to have sex and who didn't? What made you decide to (or decide *not* to) have sex with him? What did that depend on? How would it be different sometimes?
- Did you have more control over things or did he? Can you give me an example? How did this affect your sex life? What was that like for you?
- Do you feel like you relied on him more or he relied on you more? Can you give me an example of that? What about for [emotional/practical] reasons? How did this affect your experience of having sex with him?
- Did the two of you ever talk about sexually transmitted diseases? Can you tell me about a time that you did?

What are some things that your sexual partners have appreciated about you? What have they wanted you to do differently or change about yourself? How do you think men want women to act during sex?

- Did you usually have orgasms with that partner? Did he ever have trouble with the act of sex?
- Did you ever do things with him that you didn't like or enjoy? What did you prefer not to do?

Have you ever had sex against your will? What happened? How has that experience affected sex in your relationship with [specific partner]? What about with other partners?

General Probes:

- What makes those things important?
- What do you think about when that happens?
- What was that like?
- Did that keep you from [doing that] again?
- What did you think would happen?
- What makes you think that?

4) Condom Use (10-20 minutes)

Now I'd like to take some time to talk about contraceptives …

What types of contraceptives did you use with [that partner]? What other types of contraceptives have you used? What determined whether you used a contraceptive with [that partner]? What determined the type of contraceptive you used?

Tell me about the last time that you used a condom. What about the last time that you didn't use one?

Have you ever thought about using a condom but then didn't end up using one? If so, tell me about it.

Have you ever brought up the idea of using one to [that partner]? How did that go? How do you think he would have reacted if you brought up the idea of using a condom?

What have men said about condoms to you? What are your feelings about condoms? What makes using condoms difficult?

What did you think about condoms when you were younger, like when you first learned about them or were first sexually active? What changed?

What circumstances or situations would make you more likely to use condoms?

Possible Follow-ups:

- What were you thinking then?
- What were you feeling then?
- Do you think other people feel the same way? What makes you think that?
- What would it take to make you want to use them more?
- What happened after that?

5) Mental Health (10-20 minutes)

What kind of mood are you in most of the time? Do you ever get stressed out? What kinds of things increase your stress level?
Do you ever feel anger? jealousy? shame? guilt? What are some ways that you cope with those feelings?

Thinking back to the last time you remember having sex, what was your mood like then? Was it common for you to feel like that? Did it change from before to after you had sex?

Have you ever felt like your stress is overwhelming you so much that you have trouble concentrating on anything else? If so, what types of stressors do you have? Do you have any ways of making the stress go away?

Have you ever felt sad or numb for a long period of time? If so, what do you usually do to try to make yourself feel better?

Do you see any connections between stress (or other emotions) and your decisions around sex? Tell me a time when being stressed affected sex with [that partner].

How did being stressed affect your relationship with [that partner]? Tell me about a specific time when that happened.

Have you ever been diagnosed with a mental illness?

6) Substance Use in Relationships (10-20 minutes)

Lastly, I want to ask you some questions about drug and alcohol use within your relationships.

Have you ever used drugs or alcohol? Did you ever use or drink with [that partner]? Tell me about a time when you used or drank with [that partner].

Do you think drugs or alcohol influenced your relationship with [that partner]?

Possible Follow-ups:

- What was sex like when you were high? Tell me about a time when you were drunk/high while having sex.
- Did you ever make different decisions about your relationship or about sex when you had been using or drinking? Tell me about that.
- Do certain drugs or alcohol make you want to have sex more or less? Which ones?

[If the client has indicated prior injection of drugs]:

When was the first time you injected drugs? Tell me what happened. Tell me about a time when you injected drugs with a [clean/dirty] needle. How did you know it was [clean/dirty]?

Possible Follow-ups:

- Who taught you how to do that? Who taught you about cleaning needles or where to get a new one? What was their relationship to you?
- Who else have you injected with? Who did you usually inject with?

7) Closing (5 minutes)

- ✓ Let the respondent know that you will begin to wind down the interview.
- ✓ Revisit anything that you feel was left hanging.
    - What questions did I leave out? Is there anything else that you think I should know about?
- ✓ Check-in with her about how she feels the interview went for her.
- ✓ Ask her if there are any questions she would like to ask about the study or any topics she would like to revisit.
- ✓ Assure her of the value of her contribution and thank her.

II. Example of how the intersubjective discourse that occurred between the researcher and the participant impacted the participant's desire to increase self-reflection processes. Participant 207 was White and was between the ages of 34-41.

##SSY##
Okay. Um how are you feeling about the interview and how it went for you?

##207##
Um okay. A lot of things that um that I haven't thought about in a long time and a lot of things that I've chose not to think about or that I've tried not to admit to myself about, so it's kind of cleansing I guess.

##SSY##
Hm.

##207##
And it's kind of um grounding I guess in a way because… I don't know. Like there's things that I've done that I'm not proud of that I've chosen not to think about or to forget about it. It's like wow I really have done that I need to really like not do that or something, you know. And most of it there's no way I've done some of those things that I've done in my life there's no way I would do if I was clean and sober.

##SSY##
Yeah.

##207##
Absolutely. An- and even if I was on drugs or on alcohol I still probably didn't want to do it, but I did it anyway… you know.

##SSY##
Yeah.

##207##
So, yeah. And, you know, and if- if I didn't probably have emotions or something I probably wouldn't have done some things, you know, like if I like this guy and this is what he does then I did it maybe. To where if he didn't then I wouldn't.

##SSY##
Mm.

##207##
So with your research on being on the um HIV and stuff (throat cleared) if didn't like that person or trust that person or have some kind of emotion then I probably wouldn't have done it that way to where putting myself at risk. You know like I said the two people that I've shared with.

##SSY##
Yeah.

##207##
I knew them, I liked them, and if I didn't I wouldn't have.

##SSY##
Yeah.

##207##
So I wouldn't have shared if I- if I didn't have an emotion.

##SSY##
Yeah.

##207##
So that's big and that's why I was um interested in helping and finding out about the results too, because you don't think about that at the time. At the time you're gettin high or whatever, you don't think about wow it's my emotion that's letting me do, take a risk here of this.

##SSY##
Yeah.

##207##
And it's my emotions thinking I trust this person, that there's no chance I'm gonna get anything.

##SSY##
Mm.

##207##
See that's an emotion, not a thought really. Not- it's not intelligent. It's knowledge. It's an emotion, because I like you I'm gonna believe you. And so I 'm gonna take the risk cause it's not a risk I don't believe because I have an emotion.

##SSY##
Hm. (loud noise in background) That's really interesting.

##207##
Yeah and that's like a wow to me right now. (short laugh) (throat cleared) So this is cool because it maybe I'll think twice now, you know. I mean I really do not wanna go um- I really do wanna make major changes because I've been dumb since April. And maybe that was my mourning phase or whatever, but I totally gave up. I didn't care, but that's really dumb because regardless of what I think (loud noise in background) or whatever, like regardless if I think my life sucks and I've done a lot of screwy things my kids probably would be better off without me. That doesn't change that they love me.

##SSY##
Mhm.

##207##
And- and that they want what they want from me, you know what I mean, and I forgot about that part. And- and I forgot about, "Wow!" I want them to be proud of their mom not embarrassed of their mom. See and ev- I didn't think about that either. So I wanna go back out and I wanna make changes. I wanna do something with myself. I wanna even though it's gunna take a lot of work and I'm gunna feel frustrated. My thing is I quit, I give up (throat cleared) or I don't deserve it or something. And I'm not gunna think that way anymore and I don't have- I mean you never know when you're gunna get hit by a bus right? So I gotta act fast. And all that energy I put in to getting my drugs or whatever (short laugh) it could take all day running all over the

place right. Wow why didn't I do that with a job, because like I would give up looking for work because I have a felony I kept gettin rejected.

##SSY##
Yeah.

##207##
And I didn't like that feeling. Well, you know how many times I go to get drugs and either it wasn't good or I got ripped off or it cost too much or I couldn't find it, all that rejection and I was okay with that. That's stupid.

##SSY##
Mm.

##207##
For- for a little bit of either feeling normal or being high. It's dumb. But I'm just thinking about that. I'm just realizing that because I've had a lot of time to think. (short laugh)

##SSY##
Well I just so appreciate you sharing-

##207##
So this is also for me.

##SSY##
-all of this stuff with me.

##207##
Because it's really giving me more to think about and more ammunition against the evilness, you know. This is actually really good for me.

##SSY##
Well I'm glad to hear that.

##207##
So I'm glad that I came in.

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