

The Use of Female Sex Workers Among Men in Nepal: Prevalence, STIs/HIV-Related Risk Behaviors, and Gender Ideology

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ABSTRACT: Heterosexual sex involving female sex workers (FSWs) is widely documented for its role in facilitating the spread of sexually transmitted infections (STIs)/HIV. Critical to such studies, and increasingly considered essential to HIV prevention efforts, is the gender constructs and power dynamics within relationships. However, little efforts have been made, which focus on male clients of FSWs, particularly on the relationship between gender ideologies and men's sexual contact with FSWs, within the Nepali context. The present study aims to fill this critical gap by assessing the prevalence of use of FSWs and its association with STIs/HIV-related risk behaviors and gender ideologies among Nepali men. We used data from the nationally representative Nepal Demographic Health Survey (NDHS) 2011. For the purpose of analyses, we included a sample of 4,121 men, aged 15–49 years. During data analyses, we used multivariate logistic regression models, adjusted for the following variables: age, region, residence, religion, educational level, wealth index, employment status, and cigarette smoking status. Of the total sample, approximately 5% reported the use of FSWs in their lifetime. In regression models, men who had sex with FSWs were more likely to report a history of STIs [adjusted odds ratio (aOR): 3.03; 95% confidence interval (CI): 1.69–5.43; $P < 0.001$], not using condom all the time (aOR: 1.31; 95% CI: 1.05–2.12; $P = 0.010$), more than one sexual partner (aOR: 3.75; 95% CI: 2.18–5.23; $P < 0.001$), and have had early sexual debut (aOR: 2.60; 95% CI: 1.85–3.67; $P < 0.001$). Respondents reporting the endorsement of violence against wives (aOR: 1.65; 95% CI: 1.01–2.84; $P = 0.04$) and male sexual entitlement (aOR: 1.63; 95% CI: 1.21–2.32; $P = 0.001$) were significantly more likely to report sexual contact with FSWs. Our findings highlight the need to develop and implement specifically tailored interventions toward male clients of FSWs, with a particular emphasis on promoting equitable gender roles and beliefs.

KEYWORDS: transactional sex, female sex workers, HIV/AIDS, sexual risk behaviors, gender ideology, Nepal

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Introduction

Globally, heterosexual sex involving female sex workers (FSWs) and their male clients is widely documented for its role in facilitating the spread of sexually transmitted infections (STIs), including HIV.^{1–3} Research on this issue has been primarily focused on FSWs, with findings of high sexual risk practices and high rates of STIs/HIV among these populations.^{4,5} Efforts have been made, which focus on male clients of FSWs in terms of curtailing the spread of STI/HIV, although to a lesser extent. A growing body of research shows high rates of inconsistent condom use, multiple sex partners, substance use, and HIV/STI among male clients of FSWs.^{1,6–8} These findings have prompted increasing recognition of male clients of FSWs as a critical *bridge population* by which STIs/HIV infection may spread from high-risk populations (eg, FSWs) to the general population (eg, wives and steady female partners).^{1,9,10}

The HIV epidemic in Nepal is considered to be driven by the Most-at-Risk Population groups, including FSWs and

their clients.¹¹ Despite a growing body of research on FSWs and their role in HIV epidemic,^{12–14} considerably little research has been devoted to their male clients in the Nepali context. Research to date has revealed that the use of FSWs in Nepal may be common among truck drivers and migrant workers, and often involves young men.^{15–17} These studies were focused primarily among higher risk groups (eg, transport workers, construction workers, and returnee migrant workers).^{9,15,17} Hence, the degree to which this issue persists in the general population remains unclear. Furthermore, no population-based studies conducted till date have investigated either the prevalence or correlates of Nepali men's use of FSWs and its link with gender ideologies and STIs/HIV-related risk behaviors. Such exploration is particularly important in order to highlight the need for the investigation of men's patterns of use of FSWs to inform STIs/HIV preventive strategies.

Critical to such studies, and increasingly considered essential to HIV prevention efforts, is the gender constructs



and power dynamics within relationships. A growing body of research has documented the ways in which gender ideologies and/or traditional gender beliefs present challenges to STI/HIV prevention efforts within a given cultural context.^{8,18,19} In particular, attitudes of men's sexual entitlement (ie, supportive of male sexual privilege) and culturally sanctioned norms of masculinity contributes to asymmetrical power balance that facilitate men's sexual contact with FSWs and risk for STIs/HIV. For example, men's use of FSWs is often viewed as a manifestation of masculinity,^{20–22} and men's perceptions of sexual entitlement seem to relate to their use of FSWs and to unsafe sexual practices.^{8,23,24} Yet, relatively little attention has been paid to the association between gender ideologies and men's use of FSWs within the Nepali context.

In an effort to address this gap in research and to maximize inferences of the findings to the general population, we conducted this study using population-based data. This study aimed to (1) assess the prevalence of Nepali men's use of FSWs; (2) examine the demographic correlates of men's engaging in sex with FSWs; and (3) examine the association of FSW sexual contact with STIs/HIV-related risk behaviors and major aspects of men's traditional gender ideologies (ie, endorsement of violence against wives and sexual entitlement).

Methods

Study design. We used data from the Nepal Demographic and Health Survey (NDHS) 2011, which is a nationally representative cross-sectional survey.²⁵ The NDHS utilized a multistage cluster-sampling procedure for data collection. The first stage involved the selection of a total of 95 urban and 194 rural enumeration areas (wards in the village development committees and subwards in the municipalities). In the second stage, households within each enumeration area were selected adopting systematic sampling technique. Participants were recruited by trained research assistants and were interviewed privately. All participants provided written informed consent prior to data collection. The NDHS utilized face-to-face interview using a structured questionnaire to collect data. The questionnaires were translated from English into the three main local languages (Nepali, Maithali, and Bhojपुरi) and back translated into English. Further details of sampling technique, data collection, and data management procedures are documented elsewhere.²⁵ This procedure identified 12,918 eligible women, of which 12,674 completed the survey, and 4,323 eligible men, of which 4,121 completed the survey, resulting in the response rate of 95.3%. For the purpose of this study, we then restricted our sample to men aged 15–49 years. This comprised a total of 4,121 men.

Ethical approval for the NDHS protocol was obtained from the Nepal Health Research Council, Nepal, and the IFC Macro Institutional Review Board, USA. The present study complied with the principles of the Declaration of Helsinki.

Measures. We used basic sociodemographic variables such as age, ecological region, place of residence, religion, educational status, employment status, marital status, wealth index, and current smoking status of the participants. The dependent variable, *sex with FSW*, was assessed via a question regarding sexual contacts: *sexual contact with an FSW* (in lifetime). Men's affirmative response to this question was coded as *yes* for sex with FSW.

Variables of interest were grouped into two categories: *STIs/HIV-related sexual risk behaviors* and *gender ideologies*. Items used to measure individuals' sexual risk behaviors included the following: *during the past 12 months, have you had: (i) a disease which you got through sexual contact; (ii) had a bad-smelling abnormal genital discharge; or (iii) had a genital sore/ulcer?*, *What is the total number of sexual partners you had in your lifetime?*, *Was a condom used every time you had sex in the past 12 months?*, *Was a condom used in the last time you had sexual intercourse?*, and *How old were you when you had sexual intercourse for the very first time?* As in prior study, participants who reported to have had first intercourse at or before the age of 16 were classified as having *early sexual debut*.²⁶

Variables related to gender ideologies were grouped into two domains: (1) justification of violence against wife and (2) sexual entitlement. The former domain, which captured attitudes and beliefs about wife beating, was assessed using a modified version of the *Battering is Justified Subscale of the Attitudes and Beliefs about Wife Beating Scale*.²⁷ Respondents were asked if husbands were justified in hitting or beating wives across five contexts (eg, *wife goes out without telling husband*, *wife neglects the children*, *wife argues with husband*, *wife refuses to have sex with husband*, and *wife burns food*). Affirmative response to any of these items was coded as *yes* for justification of violence against wife. In addition, sexual entitlement of the sampled men was measured using the standard Nepal Demographic and Health Survey questions²⁵: *wife justified refusing sex if husband has other women* and *wife justified asking husband to use condom if he has STI*. The missing data on the dichotomous variables (eg, sex with FSW, STIs/HIV-related risk factors, and gender ideology among participants) were treated as *no*.

Analysis. The prevalence estimates of use of FSWs were calculated for the overall sample. Univariate analyses were carried out in order to examine the frequency distribution of these data. We calculated the prevalence estimates for each item across both gender ideology scales. In order to determine the demographic correlates of use of FSWs, multivariate logistic regression models were constructed. All key assumptions of regression were checked before conducting regression analysis. The regression model was adjusted for all possible covariates: age, region, residence, religion, educational level, wealth index, employment status, and cigarette smoking status; the selection of which was guided by the results from prior studies and univariate analyses. We used SPSS software, version 20.0, to conduct data analyses with $P < 0.05$.²⁸ As recommended



by the NDHS report, we weighted our analyses using the sample weight to account for the complex sampling design of the NDHS.

Results

Participant characteristics. The current study included 4,121 men (age range, 15–49 years), with a mean current age of 29.1 years. More than half of the respondents were from Terai region, and 82.6% of them from rural areas. The majority of them were identified as Hindu (84.6%) and reported to have received some form of formal education (86.2%). Over 77% of the sampled men reported to be currently involved in some sort of income-generating activities and were distributed fairly evenly across the wealth quintiles. Of the total sample, almost two-thirds of them indicated to be currently married. Across the total sample, almost 5% reported to have had sexual contact with FSWs in their lifetime (Table 1).

STIs/HIV-related risk factors and gender ideology. The prevalence of self-reported STIs among this sample was found to be 2.5%. More than two-third of the respondents (69%) reported to be sexually active in the past 12 months. Just 3.8% of the respondents reported having more than one sexual partners in the past 12 months. Of those who were sexually active in the past 12 months, only a small proportion of them (10.8%) reported consistently using condom during every sexual intercourse and 16.3% reported using a condom during their last sexual encounter. One in every seven individuals reported having an early sexual debut (Table 2).

In terms of gender ideologies, only 2.8% of the respondents expressed endorsement of violence against wives (eg, husband justified in hitting or beating wife). Similarly, attitudes of sexual entitlement among sampled men varied across survey items: 73.7% of the respondents reported that the wife is justified in refusing sex if her husband has other women and only 4.3% of them reported that the wife is justified in asking her husband to use a condom if he has STI (Table 2).

Association between participant characteristics and the use of FSWs. In a multivariate logistic regression analysis, several independent factors were identified that are related to lifetime use of FSWs. Men with higher levels of formal education were 1.87 times more likely to have engaged in sexual activity with FSWs as compared to those with no formal education. Similarly, men belonging to the richest wealth index were 2.28 times more likely to have sexual relationship with FSWs as compared to those in the poorest wealth index. Further, it was identified that divorced men were 5.08 times more likely to have sexual contact with FSWs as compared to unmarried men (Table 3).

Association of the use of FSWs with STIs/HIV-related risk behaviors and gender ideology. Respondents who reported the use of FSWs were 3.03 times more likely to report a history of STIs compared to those who did not report

Table 1. Characteristics of participants (N = 4,121).

| VARIABLES | n | % |
|--------------------------|-------------|------|
| Age (years) | | |
| <19 | 978 | 23.7 |
| 20–29 | 1266 | 30.7 |
| 30–39 | 1041 | 25.3 |
| 40 and above | 836 | 20.3 |
| Mean ± SD | 29.1 ± 10.1 | |
| Region | | |
| Mountain | 245 | 5.9 |
| Hill | 1658 | 40.2 |
| Terai ^a | 2218 | 53.8 |
| Residence | | |
| Urban | 717 | 17.4 |
| Rural | 3404 | 82.6 |
| Religion | | |
| Hindu | 3472 | 84.2 |
| Buddhist | 354 | 8.6 |
| Muslim | 128 | 3.1 |
| Others ^b | 168 | 4.1 |
| Educational level | | |
| No education | 567 | 13.8 |
| Primary | 814 | 19.7 |
| Secondary | 2108 | 51.1 |
| Higher | 632 | 15.3 |
| Wealth index | | |
| Poorest | 610 | 14.8 |
| Poorer | 695 | 16.9 |
| Middle | 830 | 20.1 |
| Richer | 920 | 22.3 |
| Richest | 1066 | 25.9 |
| Employment status | | |
| No | 929 | 22.5 |
| Yes | 3192 | 77.5 |
| Marital status | | |
| Never married | 1433 | 34.8 |
| Married ^c | 2626 | 63.7 |
| Widowed | 23 | 0.5 |
| Divorced ^d | 39 | 0.9 |
| Use of FSWs ^e | | |
| No | 3927 | 95.3 |
| Yes | 194 | 4.7 |

Notes: ^aLow-lying, southern plain land in Nepal. ^bIncludes Christian, Kirat, and others. ^cIncludes married and living with partner. ^dIncludes divorced, no longer living together, and separated. ^eFemale sex workers.

the use of FSWs. Among surveyed men who reported being engaged in penetrative sex in the past 12 months, those who reported having engaged in sexual activity with FSWs were 3.75 times more likely to report multiple sex partner, 1.31 times



Table 2. STIs/HIV-related risk factors and gender ideology among participants (N = 4,121).

| VARIABLES | n | % |
|--|------|------|
| STIs/HIV-related risk factors ^a | | |
| History of STI (last 12 months) ^b | | |
| No | 4017 | 97.5 |
| Yes | 104 | 2.5 |
| No. of sex partners (last 12 months) | | |
| 0 | 1279 | 31.0 |
| 1 | 2686 | 65.2 |
| 2–4 | 146 | 3.6 |
| ≥5 | 9 | 0.2 |
| Multiple sex partners (last 12 months) | | |
| No | 3966 | 96.2 |
| Yes | 155 | 3.8 |
| Used condom every time (last 12 months) n = 2842 | | |
| No | 2534 | 89.2 |
| Yes | 308 | 10.8 |
| Used condom during last sex n = 2842 | | |
| No | 2379 | 83.7 |
| Yes | 463 | 16.3 |
| Early sexual debut ^c | | |
| No | 3512 | 85.2 |
| Yes | 609 | 14.8 |
| Gender ideology | | |
| Husband is justified in hitting or beating wife ^d | | |
| No | 4005 | 97.2 |
| Yes | 116 | 2.8 |
| Wife justified refusing sex if husband has other women | | |
| No | 1085 | 26.3 |
| Yes | 3026 | 73.7 |
| Wife justified asking husband to use condom if he has STI | | |
| No | 179 | 4.3 |
| Yes | 3942 | 95.7 |

Notes: ^aIncludes STIs and HIV/AIDS. ^bIncludes bad smelling genital discharge and genital sore/ulcer. ^cItem dichotomized: No: age of first sex at or before 16 years; Yes: age of first sex after 16 years of age. ^dBeating justified: if wife goes out without telling husband, neglects the children, argues with husband, refuses to have sex with husband, and burns food.

less likely to have used condom during last penetrative sex, and 2.60 times more likely to have early sexual debut.

Men reporting the endorsement of violence against wives (eg, husband justified hitting or beating wife) were 1.65 times more likely to have engaged in sexual intercourse with FSWs as compared to those reporting no use of FSWs. Similarly, Nepali men demonstrating sexual entitlement (ie, wife not justified refusing sex if husband has other women) were 1.63 times more likely to report a sexual relationship with FSWs than their counterparts (Table 4).

Table 3. Association between participant characteristics and the use of FSWs, listed with odds ratio (ORs) and 95% confidence intervals (CIs).

| VARIABLES | USE OF FSWs | | |
|-----------------------|-------------|-------------|-------|
| | OR | 95% CI | P |
| Age | 0.99 | 0.97, 1.01 | 0.855 |
| Region | | | |
| Mountain | – | – | – |
| Hill | 1.42 | 0.62, 3.27 | 0.405 |
| Terai ^a | 1.71 | 0.74, 3.92 | 0.206 |
| Residence | | | |
| Urban | – | – | – |
| Rural | 1.13 | 0.75, 1.71 | 0.543 |
| Religion | | | |
| Hindu | – | – | – |
| Buddhist | 1.08 | 0.61, 1.92 | 0.778 |
| Muslim | 1.02 | 0.42, 2.46 | 0.965 |
| Others ^b | 1.13 | 0.51, 2.51 | 0.751 |
| Educational level | | | |
| No education | – | – | – |
| Primary | 1.03 | 0.59, 1.81 | 0.902 |
| Secondary | 1.38 | 0.81, 2.35 | 0.230 |
| Higher | 1.87 | 1.01, 3.50 | 0.050 |
| Wealth index | | | |
| Poorest | – | – | – |
| Poorer | 0.73 | 0.37, 1.47 | 0.389 |
| Middle | 1.60 | 0.88, 2.90 | 0.117 |
| Richer | 1.46 | 0.78, 2.72 | 0.233 |
| Richest | 2.28 | 1.21, 4.30 | 0.010 |
| Employment status | | | |
| No | – | – | – |
| Yes | 1.23 | 0.79, 1.90 | 0.344 |
| Marital status | | | |
| Never married | – | – | – |
| Married ^c | 1.42 | 0.89, 2.26 | 0.132 |
| Widowed | 1.12 | 0.13, 9.19 | 0.911 |
| Divorced ^d | 5.08 | 1.94, 13.30 | 0.001 |

Notes: ^aLow-lying, southern plain land in Nepal. ^bIncludes Christian, Kirat, and others. ^cIncludes married and living with partner. ^dIncludes divorced, no longer living together, and separated.

Discussion

Findings from this first national-based population survey revealed that approximately 5% of Nepali men reported a sexual relationship with FSWs in their lifetime. Notably, men reporting sexual contact with FSWs were over twice as likely to report an STI diagnosis and a range of STIs/HIV-related risk behaviors (ie, multiple sex partners and early coital debut), thus suggesting considerable risk for STIs/HIV transmission or acquisition within Nepali context.²⁶ Results also revealed that men who reported beliefs supportive of

**Table 4.** Association of use of FSWs with STIs/HIV-related risk behaviors and gender ideology, listed with odds ratio (ORs) and 95% confidence intervals (CIs).

| VARIABLES | USE OF FSWs | | | |
|---|-------------|------------|------------------|------------|
| | OR | 95% CI | aOR ^a | 95% CI |
| STIs/HIV-related risk factors | | | | |
| History of STI ^b | 4.02*** | 2.32, 6.98 | 3.03*** | 1.69, 5.43 |
| Multiple sex partner | 4.78*** | 2.20, 7.42 | 3.75*** | 2.18, 5.23 |
| Used condom every time | 1.25 | 0.66, 2.34 | 0.94 | 0.46, 1.93 |
| Used condom during last sex | 0.72** | 0.48, 0.91 | 0.76** | 0.47, 0.95 |
| Early sexual debut ^c | 2.55*** | 1.85, 3.52 | 2.60*** | 1.85, 3.67 |
| Gender ideology | | | | |
| Husband justified for violence against wife ^d | 1.76* | 1.08, 2.97 | 1.65* | 1.01, 2.84 |
| Wife justified refusing sex if husband has other women | 0.60** | 0.44, 0.82 | 0.61** | 0.43, 0.82 |
| Wife justified asking husband to use condom if he has STI | 1.58 | 0.66, 3.76 | 1.38 | 0.56, 3.36 |

Notes: ^aAdjusted for age, region, residence, religion, educational level, wealth index, employment status, and cigarette smoking status. ^bIncludes bad smelling genital discharge and genital sore/ulcer. ^cItem dichotomized: No: age at first sex, ≤16 years; Yes: age at first sex, >16 years. ^dBeating justified: if wife goes out without telling husband, neglects the children, argues with husband, refuses to have sex with husband, and burns food. Statistically significant: **P* < 0.05; ***P* < 0.01; ****P* < 0.001.

gender-based violence and sexual entitlement were more likely to be involved in a sexual relationship with FSWs, indicating the prominent role of socially constructed gender norms and beliefs in promoting STIs/HIV risk.^{8,20,29,30} Given these findings and the role of FSWs in facilitating the spread of HIV in Nepal^{13,14,31,32} and elsewhere,^{2,3,33} present finding also suggest the need to address male clients of FSWs in STIs/HIV prevention and intervention efforts.

Consistent with prior reports,^{15,25} Nepali men's use of FSWs varied considerably across educational, economic, and marital status categories: men with higher educational and better economic status, and divorced men reported higher rates of sexual contact with FSWs. Although the overall prevalence of Nepali men's use of FSWs was low, it was concentrated among these specific groups, signifying the potential effectiveness of specifically tailored interventions. The identification of high-risk population groups can be helpful in guiding STIs/HIV prevention strategies and policies to reduce sexual contact with FSWs and to promote safer sexual practices among the general public, as efforts to reduce the heterosexual spread of HIV.³⁴

Evidence that the men reporting sexual contact with FSWs did not consistently use condoms in their last sexual encounters, had multiple sexual partners, had early sexual debut, and increased likelihood of STIs/HIV augments our concerns that male clients of FSWs may represent a critical bridge population in the HIV epidemic.^{1,9,10} This finding is consistent with prior reports across international literature demonstrating higher rates of both sexual risk behavior and STIs/HIV based on men's reports of sex involvement with FSWs.^{1,6,8} Thus, the present study adds to the growing body of work indicating that men who frequently seek FSWs should be considered a high-risk population, given the heightened

risk they pose for the spread of STIs/HIV to both commercial (ie, FSWs) and non-commercial sex partners (ie, wife and steady female sex partners).

New to this body of research, the current study provides the first empirical support signifying the influence of gender ideologies on men's use of FSWs in the Nepali context. Consistent with findings from prior research, the results from this study indicate a significant association between Nepali men's use of FSWs and their attitudes and beliefs about violence against wife and sexual entitlement, with controlling attitudes toward women's autonomy.^{8,20,29} These findings indicate that men's use of FSWs is associated with individuals' gender-based attitudes and point to the critical importance of culturally based gender norms and beliefs. These results highlight the importance of community-level interventions that specifically address overall constructs of gender ideologies in changing men's behavior and thereby reducing the spread of STIs/HIV.^{23,35}

The findings of the current study highlight the need to develop and implement specifically tailored interventions toward male clients of FSWs, with a particular emphasis on promoting more progressive and equitable gender roles and beliefs. As such, an efficacious approach is needed to capture this hard to reach and underserved group in an effort promote STIs/HIV programs, services, and products through community-based and/or school-based interventional efforts. These findings also call for HIV prevention strategies to begin incorporating gender-related social contexts to address gender norms and inequities, transforming power dynamics and promoting gender equality that are essential to address the STIs/HIV epidemic.^{20,36,37} Within an international context, programmatic approaches targeting men with the goals of promoting gender equity



and addressing masculinity to reduce HIV risk have been shown to be effective in improving gender attitudes.^{19,38} No research and intervention efforts, however, currently exist within Nepal, particularly targeting male clients of FSWs. The findings from the current study, thus, provide a basis for future work to develop STIs/HIV prevention interventions that have greater potential to reduce the transmission and spread of STIs/HIV via sexual contact with FSWs, as well as interventions aimed at reducing violence against women and girls, in Nepal and elsewhere.

The findings from the current study should be considered in light of certain study limitations. First, the use of self-report assessment approach in the NDHS may have limited the study's ability to precisely measure certain variables; in particular, sexual contact with FSWs and associated sexual risk behaviors. Second, the current assessment of men's sexual contact with FSWs was relatively broad. Thus, future research should consider using a more in-depth assessment of sexual contact with FSWs as well as take into account additional variables (eg, context of sexual contact with FSWs, age at first contact with FSW, occupation type, and migration-related characteristics) to better inform future intervention efforts. Third, the current study included variables measured at different time duration (eg, lifetime, past 12 months, and last event), which could bias the results of association. Fourth, this study is limited in its ability to assert causal relationships of the use of FSWs with gender ideologies and STIs/HIV-related risk behaviors due to the cross-sectional nature of the data. Longitudinal and qualitative researches are needed to clarify the causal and temporal relations among the use of FSWs, STIs/HIV risk, gender norms, and beliefs.

Conclusions

The current study presents novel findings regarding the prevalence and demographic correlates of Nepali men's use of FSWs and the association of FSW sexual contact with gender ideologies and STIs/HIV-related risk behaviors. Currently, the vast majority of HIV prevention efforts targets FSWs,⁸ with little attention paid to their male clients. The current study helps to fill this critical gap by identifying high-risk groups for seeking sexual contact with FSWs as well as modifiable risk factors for such risk behaviors (ie, culturally linked gender attitudes relating to violence against women and male entitlement to sexual privileges). Given increasing recognition of the bridging role of male clients of FSWs in transmitting STIs/HIV from high-risk population (FSWs) to the general population,^{1,9,10} the present findings indicate an urgent need to prioritize research and programmatic efforts specifically targeting this understudied high-risk group.

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Author Contributions

Conceived and designed the experiments: RS, PK, and MC. Analyzed the data: RS. Wrote the first draft of the manuscript: RS and PK. Contributed to the writing of the manuscript: RS, PK, and MC. Agree with manuscript results and conclusions: RS, PK, and MC. Jointly developed the structure and arguments for the paper: RS, PK, and MC. Made critical revisions and approved final version: RS, PK, and MC. All authors reviewed and approved the final manuscript.

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