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Acceptability of Antiretroviral Pre-Exposure Prophylaxis from a Cohort of Sexually Experienced Young Transgender Women in Two U.S. Cities

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Abstract

Emtricitabine/tenofovir disoproxil fumarate as Pre-exposure Prophylaxis (PrEP) is can prevent HIV infection among at-risk individuals, including young transgender women (YTW). We used baseline data from 230 HIV-uninfected YTW (ages 16–29 years) who were enrolled in Project LifeSkills during 2012–2015. We examined factors associated with perceived acceptability of PrEP use (mean score=23.4, range=10.0–30.0). Participants were largely transgender women of color (67%) and had a mean age of 23 years (SD=3.5). In an adjusted multiple linear regression model, PrEP interest ($\beta=3.7$, 95% CI=2.2–5.2) and having a medical provider who meets their health needs ($\beta=2.9$, 95% CI=1.3–4.4) was associated with higher PrEP acceptability scores, whereas younger age (21–25 vs 26–29 years) ($\beta=-2.0$, 95% CI=-3.6–0.4) and reporting transactional sex in the past 4 months ($\beta=-1.5$, 95% CI=-3.0–0.1) was associated with lower PrEP acceptability scores (all p 's<0.05). Enhancing PrEP-related interventions among younger YTW or those with history of transactional sex could bolster PrEP acceptability for this population.

RESUMEN

Emtricitabine/tenofovir disoproxil fumarate como profilaxis preexposición (PrEP) puede prevenir VIH en personas con alto riesgo, incluyendo mujeres jóvenes transgénero (YTW). Usamos datos de línea base de 230 YTW sin infección por VIH inscritas en *Project LifeSkills* para examinar las variables asociadas con aceptabilidad de PrEP (promedio=23.4, intervalo=10.0-30.0). Participantes eran mayormente mujeres transgénero de color (67%) con edad promedio de 23 años (DE=3.5). En un modelo de regresión lineal múltiple, interés en PrEP ($\beta=3.7$, 95% CI = 2.2–5.2) y tener un proveedor de atención médica que cumple con sus necesidades ($\beta=2.9$, 95% CI = 1.3–4.4) era asociado con mayor aceptabilidad de PrEP, mientras que una edad menor (21-25 vs 26-29 años) ($\beta=-2.0$, 95% CI=-3.6–0.4) y sexo transaccional en los últimos cuatro meses ($\beta=-1.5$, 95% CI =-3.0–0.1) era asociado con menor aceptabilidad. Se necesitan intervenciones acerca de PrEP para YTW, sobre todo aquellas que han ejercido trabajo sexual, para aumentar la aceptabilidad de PrEP para esta población.

Keywords

Pre-Exposure Prophylaxis; Transgender women; HIV prevention; Young Adults

INTRODUCTION

Transgender women bear a high burden of the HIV epidemic in the United States, with an estimated prevalence of 21.7% [Confidence Interval (CI)=18.4%–25.1%) (1). Young transgender women (YTW, ages 16–29) of color are disproportionately at-risk of HIV infection (1–4). Contextual factors that contribute to HIV risk among transgender women are multilevel (i.e., individual-, interpersonal-, and structural-levels) (2, 5, 6). Individual-level factors include condomless sex (1, 2, 4), sex work (3, 7), history of sexually transmitted infections (STI) (3, 8, 9), substance use (5), and mental health problems. Some interpersonal-level determinants include intimate partner violence (3, 7), including sexual assault and physical abuse (7, 10). Structural-level factors such as incarceration, economic marginalization (homelessness, unemployment, job discrimination), and inadequate healthcare (lack of health insurance, refusal of trans-related care) contribute to HIV seropositivity among transgender women (5, 6, 11, 12). Taken together, these findings underscore the need for multiple high-impact HIV prevention options tailored to this population (10, 13), including Pre-exposure Prophylaxis (PrEP).

When taken as prescribed emtricitabine/tenofovir disoproxil fumarate, as HIV Pre-exposure Prophylaxis (PrEP) is a highly effective HIV prevention method for HIV-uninfected individuals at high-risk for infection (14), such as YTW (15). While transgender women have been included in PrEP clinical trials (14–16), little is known about their acceptability of PrEP in practice now that trials have established efficacy and that categories for classifying individuals across the “PrEP care continuum” have been proposed (17–19). Understanding the factors associated with PrEP acceptability among YTW is an important first step of the PrEP care continuum, and facilitates identifying those who are PrEP indicated and amenable to PrEP uptake.

Studies examining the factors influencing PrEP acceptability among transgender women have found that while there was generally a high degree of interest, concerns persisted about the absence of trans-specific PrEP marketing, prioritization of hormonal therapy, and medical mistrust (20–24). Another study conducted in Thailand found that awareness of PrEP and having private health insurance were associated with PrEP acceptability among transgender women (25). While these few studies have documented PrEP acceptability in transgender women, they have mainly been descriptive in nature, with smaller sample sizes. As such, identifying factors associated with PrEP acceptability among larger samples of YTW and data analysis specific to YTW are important next steps in this area of research.

The purpose of this study was to examine PrEP acceptability and related factors (e.g., socio-demographics, healthcare utilization, and PrEP interest and awareness) as well as reasons for reporting lack of interest, in a community-recruited cohort of HIV-uninfected, sexually active YTW in two US cities.

METHODS

Study participants and procedures

Our full study protocol is described elsewhere (26, 27). Briefly, Between May 2012 and September 2015, 300 sexually active YTW (ages 16–29 years) from Boston and Chicago were enrolled in Project LifeSkills, a randomized controlled efficacy trial of a culturally-tailored, empowerment-based, behavioral HIV prevention intervention designed for and by YTW in the US(18). Informed by principles of community-based participatory research, local YTW and research team members from both study sites (Boston and Chicago) identified multiple convenience sampling recruitment strategies including: 1) bars and nightclubs where YTW congregate, 2) community centers, 3) online social media platforms including Craigslist and Facebook, and 4) word-of-mouth via peer recruiters. Participants eligible for the study were between ages 16 and 29 years-old, assigned male sex at birth but currently identify along the transfeminine gender spectrum (e.g., transgender woman, male-to-female, female, transsexual woman), spoke English, and self-reported having condomless anal or vaginal sex in the prior 4 months. Participants completed a 2-hour baseline quantitative assessment and HIV testing. Study assessments were implemented at study sites in Boston and Chicago and conducted in a private counseling room; both sites are community based organizations that provide HIV prevention services to sexual and gender minority groups. Written consent was obtained from all enrolled study participants. After the baseline assessment visit, all study participants received a \$20 American Express gift card and a travel reimbursement in the form of a round-trip public transportation card. All study procedures were approved by the institutional review boards at both participating organizations.

Measures

Data used for this study were from baseline measures. Using computer-assisted self-interviewing (CASI), participants completed a quantitative assessment on the constructs described below:

Socio-demographics—Participants were asked about their age, race/ethnicity (Black, Latina, White, other race/ethnicity), current employment status (employed vs. not employed), sexual orientation identity (lesbian, gay, bisexual, heterosexual, other/not listed), and highest education attained (high school or less vs. college or more). Additionally, YTW were asked about their history of recent (<4 months) engagement in sex work (yes vs. no), recent incarceration (yes vs. no), and recent homelessness (yes vs. no).

Healthcare Utilization and Sexual Health History—To measure healthcare utilization, 4 items based on indicators from PrEP literature that facilitate access to PrEP were used (20, 21, 23–25, 28, 29). These were insurance (government-issued, private, or no insurance), having primary care provider (yes/no), types of healthcare accessed (clinics, private office, hospital, or no access), having provider that meet YTW's health needs (always/sometimes vs. never/rare). For sexual health history, we asked participants about lifetime use of hormone replacement therapy (HRT; yes/no) and any prior STI diagnoses (yes/no).

PrEP interest and awareness—Participants were given a brief description of PrEP and were asked if they were aware of PrEP prior to the study: “Have you heard of HIV-negative people taking HIV medication before sex because they thought it would lower their chances of getting HIV (also known as PrEP)?”, with possible responses of “yes” or “no.” Participants were then asked if they were interested in taking/using PrEP, with possible responses of “not at all interested,” “somewhat interested” and “very interested.” Consistent with our previous operationalization of PrEP interest (28), these responses were then dichotomized; PrEP interest was conservatively defined as being “somewhat/very interested” in taking PrEP.

Reasons for being uninterested in PrEP—Among participants who reported that they were not interested in PrEP, a follow up question with a list of reasons was given. These reasons were generated based from our formative work as well as the HIV prevention and PrEP literature on this population (20, 21, 23–25, 28, 29). Reasons included: mistrust (‘I don’t trust researchers/providers’), being worried (‘I worry about side effects’), low HIV-risk perception (‘I’m not at risk of getting HIV’), doubts about PrEP efficacy (‘the HIV medication may not protect me from getting HIV’), PrEP-related stigma (‘I’m afraid people will think I’m HIV-positive if they see me taking the medication’), Other, or a combination of 2 or more of these reasons.

PrEP Acceptability (outcome)—To assess PrEP accessibility, we adapted a 10-item measure that was modeled on a scale used in the Adolescent Trial Network (ATN) 082 PrEP Study (30). Prior to administration of the survey to the target sample, we piloted tested this measure with YTW who were members of the research teams in Boston and Chicago (N = 8). PrEP acceptability was assessed by asking participants how likely they are to take PrEP (1 = ‘not at all likely,’ 2 = ‘somewhat likely,’ and 3 = ‘very likely’) in various situations, including different dosing frequencies (“How likely would you be to take a drug that protects you from getting HIV if you had to take it:” a) every day, b) 3 times per week, and c) prior to sex) and types of partnerships (“How likely would you be to take a drug that

protects you from getting HIV if you: a) were in a monogamous relationship with a partner you knew was HIV-infected, and b) only had casual sexual partners?). Classifying PrEP acceptability responses in this way is a technique previously applied by researchers examining characteristics associated with PrEP acceptability (30–33). For analysis, the PrEP acceptability items were summed to create a total scale score with scores ranging from 10–30; each participant's total scale score was grouped into one of three categories for ease of interpretation, with 10–16 denoting lower acceptability, 17–23 denoting moderately acceptability, and 24–30 denoting higher acceptability.

Analysis Plan

We analyzed data for 230 HIV-uninfected YTW who enrolled in Project LifeSkills. An additional 65 YTW were determined to be living with HIV and were therefore excluded from the study. We performed descriptive analyses and calculated column percentages, mean scores, and standard deviation for PrEP acceptability by various characteristics, including study site, year, socio-demographics, healthcare indicators, and PrEP indicators. To examine characteristics associated with PrEP acceptability, we performed a bivariate and multivariate linear regression analysis. All variables that were statistically significant in the unadjusted linear models were included in the final adjusted multiple linear regression model. Prior to running our final adjusted model, we conducted multicollinearity tests to assess the predictor variables for multiple correlation, and determined that this was not a concern. We performed sensitivity analysis with the PrEP acceptability scale score dichotomized at the median was consistent with the reported findings. Alpha was set to < 0.05 *a priori*, and all analyses were performed using SPSS version 23.0 (34).

RESULTS

Descriptive Analyses

Table I displays the study site, year of enrollment, socio-demographics, healthcare indicators, and PrEP-related characteristics.

Study characteristics—In this sample, 58% of the participants were recruited from the Boston study site. With the exception of 2015, a similar proportion (approximately 30%) was enrolled during each study year.

Socio-demographics—The sample was 42% black/African American, 13% Latina or Hispanic, 33% white, and 12% other race/ethnicity. Participants' mean age was 23 years [standard deviation (SD)=3.5 years; range=16–19]; almost half (47%) of the sample was between ages 21 and 25 years. The majority (72%) was unemployed, and 39% identified as heterosexual, 24% gay, 23% bisexual, 7% lesbian, and 8% other sexual identity. More than half (59%) had high school or less education. In the past 4 months, 34% had engaged in sex work, 7% were incarcerated, and 22% were homeless.

Healthcare Indicators—Over half (57%) of YTW had government-issued healthcare insurance; 24% had no insurance, and 18% had private insurance. Seventy-eight percent of YTW accessed clinics as their healthcare facility, and 70% had primary care provider.

However, 30% reported that their provider ‘rarely’ or ‘never’ meets their health needs. More than half (65%) of the sample had ever been on HRT. Almost one fifth (18%) had prior STI diagnoses.

PrEP Indicators—PrEP acceptability mean scale score was 23.4 (SD=5.8), indicating that on average, YTW in this sample were somewhat likely to accept PrEP in various scenarios. Sixty-eight percent had no prior awareness of PrEP. However, after hearing about what PrEP is, 66% indicated that they were interested in taking PrEP. The most commonly reported reasons for being uninterested in PrEP (Table II) included concerns for medication side-effects (20.5%) and mistrust with providers and researchers (16.7%).

Regression Analyses

Bivariate unadjusted linear regression models examining factors associated with PrEP acceptability are presented in Table I. Factors associated with an increase in PrEP acceptability scores were older age, history of recent engagement in sex work, having a medical provider who meets YTW’s health needs, and PrEP interest (all p-values < 0.05).

In Table I, we present data on the final adjusted multiple linear regression model. PrEP interest ($\beta=3.7$, 95% CI = 2.2–5.2, $p<0.001$) and having providers who meet YTW’s health needs ($\beta=2.9$, 95% CI=1.3–4.4, $p<0.0001$) were associated with higher PrEP acceptability scores, whereas younger age (ages 21–25 vs 26–29 years) ($\beta=-2.0$, 95% CI = -3.6–0.4, $p=0.01$) and reporting transactional sex <4 months ($\beta=-1.5$, 95% CI = -3.0–0.1, $p=0.04$) were associated with lower PrEP acceptability scores.

DISCUSSION

Among this community-recruited sample of YTW, we found low PrEP awareness, along with moderate PrEP acceptability and interest. PrEP interest was associated with PrEP acceptability. These findings are somewhat consistent with the scant, prior studies among transgender women that report low levels of PrEP acceptability and awareness, but high level of interest (30). Given that PrEP acceptability or uptake is a vital component in the PrEP care continuum (18, 19, 22), the moderate level of PrEP acceptability found in this HIV-uninfected YTW sample is concerning and highlights the need for a targeted and tailored PrEP education and delivery for YTW.

We identified several areas of concern. First, PrEP acceptability among this sample remained the same between years 2012–2015. Given that PrEP was approved and has been made widely available in the US since 2012 (35), this suggests that PrEP promotion programs may not have been able to effectively reach and resonate with YTW communities over time. As such, it is vital for PrEP promotion programs to evaluate their approaches to PrEP messaging and education efforts towards YTW communities.

Second, with the exception of providers meeting their health needs, there were no differences in PrEP acceptability for all healthcare indicators. The majority of the sample had insurance, had access to a primary care provider, and were accessing clinics, yet all had similarly moderate levels of PrEP acceptability. These factors have been identified to impact

PrEP initiation and adherence (20–25). However, other healthcare indicators that may affect PrEP acceptability specific for YTW in clinical settings remain unexplored.

Third, our findings suggest that while some structural-level barriers for healthcare needs can be addressed (e.g., having insurance, primary care provider, access to clinics or other healthcare facilities), there are other factors at the interpersonal-level (e.g., provider-patient interaction) that may affect YTW's acceptability to taking PrEP. In this study, about 1 in 5 YTW reported mistrust with providers and researchers as a reason for being uninterested in taking PrEP. Previous studies have suggested that experiences of discrimination and mistrust with providers are barriers to PrEP and other healthcare services in clinical settings (21, 22, 24, 25, 28). We found that at the inter-personal level, having providers that meet YTW's health care needs is a facilitator of higher PrEP acceptability. Further research that looks at ways for providers to improve the quality of their interaction with YTW patients, as well as their assessment of and delivery of care to meet YTW's health needs, is needed for successful PrEP uptake. Combining PrEP programs with a gender-affirmative care that is patient-centered (23, 36) among YTW could impact PrEP acceptability.

We also found that being worried about negative side effects of PrEP is a personal-barrier that impacts YTW's acceptability to taking PrEP. This finding corroborates with other studies that sampled transgender populations who are interested in or already taking HRT but are highly concerned about possible drug-drug interaction of PrEP and HRT (15, 20, 24, 25). It is imperative for researchers and providers to examine ways to optimally deliver PrEP information and messaging components among YTW that minimizes and targets concerns for negative side effects (23).

Lastly, our findings also indicate the need to strengthen PrEP acceptability particularly among younger YTW, and those with recent experiences of sex work. The high rates of sexual risk behaviors (e.g., high number of sexual partners, inconsistent condom use, receptive role in anal sex), and numerous experiences of social barriers (e.g., discrimination due to sex work status, expulsion from school, exclusion from job opportunities, limited access to HIV prevention and transgender-related health care), places these groups of YTW at an elevated risk for HIV infection (7, 12). Moreover, a growing body of PrEP literature has recognized key populations with these characteristics (i.e., young, sex workers) as groups that can highly benefit from PrEP (6, 12, 29, 37, 38). However, many transgender women with these characteristics perceive HIV prevention as low priority (12, 24, 25), which challenges PrEP programs for YTW. In this study, we found that taking PrEP was not highly acceptable for younger YTW and those with recent history of sex work. Further research must investigate reasons for why YTW with these characteristics may not have perceived taking PrEP as highly acceptable. As such, expanding PrEP to these groups of YTW will depend not only on fostering acceptability but also on their ability to access appropriate gender-affirmative and preventative health services in the face of multiple barriers.

Limitations

This study is not without limitations. First, these data are cross-sectional in nature and do not reflect changes over time nor suggest causality about PrEP acceptability and examined

characteristics. Second, due to the eligibility requirements for the larger trial, the findings only reflect sexually at-risk YTW and are not generalizable to all YTW in the US. Third, as our dataset was primarily collected to answer our intervention trial aims, the lack of associations between some of our predictors and outcome in this study may be due to not having collected detailed measures that statistically powers on our analyses. Fourth, while this study focuses on the reported perception of PrEP acceptability, it may not translate into actual behavior of PrEP uptake. Future studies that examine the prevalence of PrEP uptake are needed in tandem to PrEP acceptability. Lastly, social desirability bias may have resulted in an underestimation of PrEP acceptability, as PrEP use is stigmatized in some communities (i.e., reflecting perceived sexual promiscuity(39, 40).

CONCLUSION

Despite these limitations, we believe that this study contributes to the scant literature examining PrEP acceptability among YTW. Overall, we found that in addition to having the basic structural-level components of health care and PrEP, having positive interpersonal-level relationships between providers and YTWs, and PrEP messaging concerning negative side effects are also essential to meet health care needs and to increase PrEP acceptability among YTW communities. As there is a high risk for HIV infection among YTW (6, 12, 29, 37) and PrEP efficacy and effectiveness depend largely on at-risk groups' ability to access and utilize PrEP (12), it is vital to engage at-risk YTW in a variety of HIV prevention strategies.

To our knowledge, these findings represent the first account of PrEP acceptability in a community-recruited sample of YTW in the US. Further research on this topic is needed to understand effective ways to increase PrEP acceptability among YTW. This could include developing interventions that seek to build trust between providers and YTW, meet YTW's other health needs (e.g., hormone therapy), and provide culturally-responsive educational materials on PrEP side-effects to bolster PrEP acceptability, particularly among youth or those with a history of recent transactional sex.

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Unadjusted and Adjusted linear regression models examining the relationship between PrEP acceptability and socio-demographic, PrEP, and healthcare characteristics of the study sample (N = 230).

Table 1

Characteristics	All	PrEP Acceptability					
		Unadjusted Model			Adjusted Model		
	n (%)	M (SD)	β (SE)	95% CI	p	β (SE)	95% CI
Total	230 (100%)	23.4 (5.8)					
<i>Study Characteristics</i>							
Study Site							
Boston	133 (57.8)	23.7 (5.3)	0.7 (0.8)	-0.9 – 2.2	0.40		
Chicago	97 (42.2)	23.0 (6.4)	–	–			
Year of Enrollment							
2012	63 (27.4)	23.6 (5.6)	–	–			
2013	72 (31.3)	22.8 (5.7)	-0.7 (1.0)	-2.7 – 1.3	0.47		
2014	66 (28.7)	23.3 (6.5)	-0.3 (1.0)	-2.3 – 1.8	0.82		
2015	29 (12.6)	24.8 (5.1)	1.2 (1.3)	-1.3 – 3.8	0.34		
<i>Socio-demographics</i>							
Race/ethnicity							
Black/African American	97 (42.2)	22.8 (6.5)	-1.0 (0.9)	-2.8 – 0.7	0.24		
Latina or Hispanic	30 (13.0)	23.9 (5.3)	0.1 (1.6)	-2.4 – 2.5	0.96		
White	76 (33.0)	23.8 (5.1)	–	–			
Other race/ethnicity	27 (11.7)	23.6 (5.5)	-0.3 (1.3)	-2.9 – 2.3	0.83		
Age in Years							
16–20	44 (19.1)	24.1 (6.1)	-0.4 (1.1)	-2.5 – 1.7	0.70	-1.0 (1.0)	-3.0 – 1.0
21–25	108 (47.0)	22.3 (6.2)	-2.1 (0.9)	-3.8 – 0.5	0.01*	-2.0 (0.8)	-3.6 – -0.4
26–29	78 (33.9)	24.5 (4.8)	–	–		–	–
Employment							
Yes	65 (28.3)	24.0 (5.2)	0.6 (0.9)	-0.8 – 2.5	0.32		
No	165 (71.7)	23.2 (6.0)	–	–			
Sexual Identity							
Gay/Homosexual	54 (23.5)	22.3 (6.1)	-1.1 (1.0)	-3.1 – 0.9	0.26		

Characteristics	All	PrEP Acceptability				
		Unadjusted Model			Adjusted Model	
		n (%)	M (SD)	β (SE)	95% CI	p
Lesbian		15 (6.5)	24.6 (5.6)	1.2 (1.6)	-2.0 - 4.4	0.47
Bisexual		52 (22.6)	24.5 (5.7)	1.1 (1.0)	-0.9 - 3.1	0.29
Heterosexual		90 (39.1)	23.4 (5.7)	-	-	
Other/Not listed		19 (8.3)	22.6 (5.8)	-0.9 (1.5)	-3.7 - 2.0	0.56
Highest education attained						
High School or less		135 (58.7)	23.2 (5.9)	-0.5 (0.8)	-2.0 - 1.0	0.53
College or more		95 (41.3)	22.7 (5.7)	-	-	
Recently engaged in sex work						
Yes		78 (33.9)	22.5 (6.2)	-2.6 (1.3)	-5.1 - 0.1	0.04*
No		152 (66.1)	25.0 (4.1)	-	-	0.04*
Recently incarcerated						
Yes		17 (7.4)	24.3 (6.2)	0.9 (1.5)	-1.9 - 3.8	0.52
No		213 (92.6)	23.3 (5.8)	-	-	
Recently homeless						
Yes		50 (21.7)	23.8 (6.2)	0.5 (0.9)	-1.3 - 2.3	0.60
No		180 (78.3)	23.3 (5.7)	-	-	
<u>Healthcare Indicators</u>						
Insurance						
Government		132 (57.4)	23.1 (5.7)	-0.9 (0.9)	-2.7 - 0.9	0.32
Private		42 (18.3)	23.5 (6.2)	-0.6 (1.2)	-2.9 - 1.8	0.63
No Insurance		56 (24.3)	24.1 (5.8)	-	-	
Have primary care provider						
Yes		160 (69.6)	23.3 (5.7)	-0.4 (0.8)	-2.0 - 1.3	0.66
No		70 (30.4)	23.6 (6.0)	-	-	
Healthcare facility accessed						
Clinic		180 (78.3)	23.3 (5.9)	-0.2 (1.3)	-2.8 - 2.5	0.89
Private Office		15 (6.5)	23.5 (5.9)	-0.0 (2.0)	-3.9 - 3.9	0.99
Hospital		14 (6.1)	24.6 (5.6)	1.4 (2.0)	-2.3 - 5.3	0.49

Characteristics	All	PrEP Acceptability					
		Unadjusted Model			Adjusted Model		
		n (%)	M (SD)	β (SE)	95% CI	p	p
No Access	21 (9.1)	23.4 (5.8)	–	–	–	–	–
Provider meeting health needs							
Always/Sometimes	160 (69.6)	24.1 (5.7)	2.5 (0.8)	0.9 – 4.1	0.003**	2.9 (0.8)	1.3 – 4.4
Rare/Never	70 (30.4)	21.7 (5.6)	–	–	–	–	–
Ever hormone replacement therapy							
Yes	150 (65.2)	23.6 (5.7)	0.6 (0.8)	–1.0 – 2.2	0.47		
No	79 (34.6)	23.1 (6.1)	–	–	–		
Missing n=1							
Prior STI Diagnoses							
Yes	42 (18.3)	24.2 (5.1)	0.9 (1.0)	–1.0 – 2.9	0.35		
No	188 (81.7)	23.3 (6.0)	–	–	–		
<i>PrEP indicators</i>							
Prior PrEP Awareness							
Yes	74 (32.2)	23.7 (5.2)	0.4 (0.8)	–1.2 – 2.0	0.61		
No	156 (67.8)	23.2 (6.1)	–	–	–		
PrEP Interest							
Yes	152 (66.1)	24.6 (4.4)	3.4 (0.8)	1.8 – 4.9	<0.001***	3.7 (0.8)	2.2 – 5.2
No	78 (33.9)	21.2 (7.4)	–	–	–	–	–

* p < .05;

** p < .01;

*** p < .001 (two-tailed tests).

M = mean; SD = standard deviation; β = beta coefficient; SE = standard error; CI = confidence interval.

° equal to or less than 4 months.

Table II

Reasons for Not Being Interested in PrEP among young transgender women in the study sample (n=78).

	n (%)
Reasons for not being interested in PrEP (n=78)	
Mistrust of providers and researchers	13 (16.7)
Worried about side effects	16 (20.5)
Low HIV risk-perception	5 (6.4)
PrEP may not protect me from HIV	4 (5.1)
HIV stigma of taking PrEP	3 (3.8)
Other	21 (26.9)
Combination of 2 or more reasons	15 (19.2)
Missing n=1	