

Frequency and risk factors associated with unprotected sex among transgenders having sex with men in Pakistan: problem behavior theory approach

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Abstract

Introduction: Transgenders (Hijras) are important population sub-group, which suffers from both inequality and inequity. They lack educational and employment opportunities rendering sex work an easy bread-winning option. The prevalence of unprotected sex among Hijras is high, though they have knowledge about its' consequences. In this study, problem behavior theory (PBT) was used to determine risk factors leading to unprotected sex among this vulnerable population. Frequency of unprotected sex among Hijras was estimated, and risk factors for unprotected sex and its' association with PBT variables were assessed.

Material and methods: Data of 150 Hijras residing in Rawalpindi, Pakistan were used for this cross-sectional study. Data collection tool applied was developed based on AHDQ employed in problem behavior theory studies. Descriptive statistics that characterized Hijras were based on their age, education, mode of income, and monthly income. Binary logistic regression was performed to find association between unprotected sex and problem behavior theory variables.

Results: Most (84.1%) of the respondents reported having unprotected sex, while fewer (71.0%) did not use a condom during their last sexual act. A positive correlation was observed between unprotected sex and parental control (OR = 1.907), while a negative correlation was observed between unprotected sex and parental support (OR = 0.919).

Conclusions: The prevalence of unprotected sex among HSWs residing in Rawalpindi is high, despite them having knowledge about HIV and its prevention methods. The parental control and parental support are associated with condom use in last sexual act.

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Key words: behavior, attitude, Hijras, sex without condom, low- and middle-income country.

Introduction

Human immunodeficiency virus (HIV) is a global public health issue, being the cause behind 32 million deaths till now. Even though the treatment and prevention services have improved over the years, there are still gaps in

HIV care. In 2018, 770,000 deaths were attributed to HIV, with an incidence of 1.7 million [1]. During 1987, first case of HIV was reported in Pakistan [2]. According to an estimate of National AIDS Control Program (NACP), currently, 0.22 million people are living with HIV in Pakistan [3].

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Pakistan has faced 8 outbreaks of HIV in the last 20 years, with a concentrated epidemic of the disease [4, 5].

Major contributors to HIV infections are people from key populations and their sexual partners. Key populations include MSMs (men having sex with men), IDUs (injection drug users), prisoners, FSWs (female sex workers) and transgenders (Hijras) [6].

In South Asia, people of the third gender are known as 'Hijras'. This term refers to eunuchs, transvestites, hermaphrodites, intersexed, bisexuals, and homosexuals. It also refers to men, who despite being physiologically male prefer dressing and acting in feminine way. They mask their homosexuality by becoming Hijras [7, 8].

Hijras are labeled as homosexual, as they are physiologically males, who dress as women and have sex with men. They are at high-risk of acquiring HIV because of their sexual practices [9]. Prevalence of HIV among Hijras (transgenders) is 7.6%. They act as a bridging population between injection drug users (IDUs) and general population, for Hijras having sexual contacts with IDUs and other male clients from general population. Most males visiting Hijras are married, thus posing a risk of transferring an infection to their spouses and children (vertical transmission). This transfer of infection from IDUs to general population has been found in Asia [4].

According to centers of disease control and prevention (CDC), the most effective method of prevention is using condoms during sexual intercourse (safer sex). Condoms are easy to use and readily available [10]. Correct and consistent condom use leads to protection of both partners against HIV. The effectiveness of condom against HIV and STIs is supported by empirical and experimental data. According to an estimate, condoms have prevented the incidence of 50 million HIV cases [11].

Problem behavior theory (PBT) explains that a problem behavior, such as risky sexual behavior, is functional, purposive, and instrumental towards achieving a certain goal. According to this theory, a problem behavior is defined as a behavior, which deviates from the norms of a society. This theory suggests that a particular behavior is shaped by the culture and experiences of a particular individual [12].

PBT is also designed to explain adolescents' behavior. Problem behavior of unprotected sex among Hijras starts during adolescent's years, and later, they get exposed to Hijra community during their early teens, which accept them as their family members [13].

The objective of the study was to investigate the underlying risk factors among Hijras leading to problem behavior of unprotected sex, and to estimate frequency of unprotected sex among Hijras.

Material and methods

This cross-sectional study was conducted in Rawalpindi, Pakistan, from October 2019 to January 2020.

After obtaining an ethical approval, primary research was performed by contacting the study subjects (Hijras).

We used Snowball sampling technique. As Hijras form a key population, a gatekeeper helped in accessing the Hijras.

Data collection tool was adolescent health and development questionnaire (AHDQ) based on Likert scale, which was translated into Urdu, and then back-translated into English for consistency. The questionnaire was a pre-tested validated and reliable tool. We however, did perform a pre-test of the adapted tool on 14 Hijras for its' reliability, which was modified for unprotected sex.

Following variables of PBT were included in the questionnaire:

- Parental support: Parents supporting their child being a transgender.
- Social criticism: Criticism faced by transgenders in a society.
- Alienation: Discrimination faced by transgenders from family and society.
- Parental control: Parents taking decisions for transgender children.
- Self-esteem: How satisfied transgenders are with their inner and outer self?
- Expectation for affection: Expectation of transgenders to be loved by their parents and society.

Subjects selected for the pilot study were not included in main data collection.

Data were collected by visiting deras (communal residence) of Hijras living in Rawalpindi. After verbal consent, questions from the questionnaire were answered by each subject individually. A gatekeeper belonging to the Hijras community helped in accessing the key population. Data were entered in SPSS, version 20, and cleaned by correcting inaccurate data entry. Frequencies for socio-demographic factors and that of sexual practices were calculated.

We used bivariate correlation to find out an association between problem behavior (condom use in last sexual act) and problem behavior theory (PBT) variables. PBT variables, which had a significant correlation with problem behavior were further analyzed through binary logistic regression. Binary logistic regression was applied as problem behavior variable was categorical, and PBT variables were in scale data type. Binary logistic regression assessed odds of having problem behavior depending on PBT variables.

Permission was acquired from the Health Services Academy's institutional review board (IRB), and confidentiality of the subjects was maintained. For interviewing Hijras under the age of 18 years, permissions from their guardians (gurus) were obtained.

Results

Socio-demographic factors

A total of 150 Hijras were contacted. The highest number of Hijras was between 26 and 35 years old, followed by teens or young adults in 16-25 age group. The rest of the Hijras were either of middle or older than 45 years old. The majori-

Table 1. Socio-demographic factors of the respondents

Factor	n (%)
Age, years	
16-25	44 (28.8)
26-35	56 (36.6)
36-45	33 (21.6)
> 45	20 (13.1)
Education	
Uneducated	62 (40.5)
Primary	22 (14.4)
Secondary	54 (35.3)
Higher	15 (9.8)
Mode of income	
Begging	3 (2.0)
Dancing	5 (3.3)
Sex work	3 (2.0)
Job	4 (2.6)
Begging and dancing	6 (3.9)
Begging and sex work	13 (8.5)
Dancing and sex work	48 (31.4)
Begging, dancing, and sex work	68 (44.4)
Job, dancing, and sex work	3 (2.0)

Table 2. Monthly incomes of Hijras

Variable	Min. (Rs.)	Max. (Rs.)	Mean (Rs.)	SD
Monthly income	3,000	150,000	27,928.10	21,939.542

Table 3. Frequency distribution of unprotected sex among the respondents based on type of customers

What kind of customers do you have unprotected sex with?	Frequency distribution, n (%)
Regular (Girya)	63 (45.7)
Irregular (Chankay)	10 (7.2)
Both	65 (47.1)

Table 4. Descriptive of frequency of sex in a month and sexually activity (years)

Variable	Min.	Max.	Mean	SD
How many times do you have sex in a month?	1	150	10.15	16.174
How long have you been sexually active (years)?	0	50	13.17	8.908

Table 5. Correlation between variables of problem behavior theory and condom use in the last sexual act among the respondents

Variable	Condom use in the last sexual act	
	Correlation coefficient	Probability value
Parental support	-0.2178*	0.015*
Parental control	0.206*	0.011*
Alienation	-0.10	0.908
Self-esteem	-0.516	0.516
Social criticism	-0.006	0.943
Expectation for affection	-0.049	0.570

ty of the Hijras were uneducated, with the rest of the population having secondary or primary education. Very few Hijras had higher education. The major mode of income among Hijras of Rawalpindi was sex work. Hijras earned their living through sex work, in combination with other methods. The most frequent combination of mode of income was begging, dancing, and sex work. A very small proportion of Hijras had jobs. Despite having jobs, they earned through sex work (Table 1).

The mean monthly income of this population was 27,928.542 ± 21,939.542 of Rupees (Rs.), while 150,000 Rs. being the highest and 3,000 Rs. the lowest monthly income (Table 2).

84.1% of Hijras engaged in unprotected sex, while 15.9% never had sex without a condom. Moreover, 71% of Hijras had not used condom in their last sexual act, while 29% had used it.

Hijras had condomless sex with both type of customers (regular and irregular), even though they preferred regular customers while having condomless sex, as compared to irregular customers (Table 3).

The highest frequency of sex in a month reported by Hijras was 150, while the lowest was 1. On average, Hijras had sex 10.15 ± 16.174 times a month. The longest duration of being sexually active in Hijras was 50 years. The mean duration of being sexually active was 13.17 ± 8.908 years (Table 4).

Problem behavior theory

Multiple correlation between condom use in the last sexual act showed a significant correlation between parental support and parental control. A negative correlation between parental support and condom use demonstrated that lower support from parents lead to higher unprotected sex in Hijras (Table 5).

Similarly, a positive correlation between parental control showed that higher parental control lead to higher unprotected sex in Hijras. There was a weak and insignificant

Table 6. Binary logistic regression model for problem behavior theory (variables) and unprotected sex (condom use in the last sexual act)

Outcome: unprotected sex	Regression coefficient (B)	χ^2	p-value	Odds ratio	95% CI
Parental support	-0.84	6.207	0.013*	0.919	0.860-0.982%
Parental control	0.645	5.631	0.018*	1.907	1.119-3.250%
Social criticism	-0.005	0.005	0.942	0.995	0.859-1.152%
Alienation	-0.008	0.014	0.907	0.992	0.860-1.144%
Expectation for affection	-0.058	0.328	0.567	0.944	0.775-1.150%
Self-esteem	-0.053	0.427	0.513	0.948	0.809-1.112%

correlation of alienation, self-esteem, social criticism, and expectation for affection with problem behavior.

Binary logistic regression

Since a significant correlation of parental support and parental control was observed with condom use in the last sexual act, binary logistic regression was applied to ascertain the effect of parental support and parental control on probability of the subjects not using condom in the last sexual act.

Binary logistic regression model was statistically significant for parental support ($p = 0.013$; < 0.05) and parental control ($p = 0.018$; < 0.05). A negative association was observed between parental support and condom use in the last sexual act as $B = -0.084$. This means that when parental support decreases, it leads to higher sex without condom. Odds of having sex without condom in Hijras having higher parental support decreased 0.919 times ($OR = 1.907$) as compared to Hijras having lower parental support. Lower parental support leads to higher unprotected sex. The confidence interval was small (range, 1.119-3.250) indicating precision (Table 6).

A positive association was observed between parental control and condom use in the last sexual act as $B = 0.645$. That means that when parental control increased, it triggered higher sex without condom. The odds of having sex without condom increased 2 times ($OR = 1.907$) in Hijra sex workers having higher parental control as compared to those with lower parental control. The confidence interval was small (range, 0.860-0.982) indicating precision.

No significant association was observed between alienation, expectation for affection, self-esteem, and social criticism.

Discussion

In our study, high frequency of unprotected sex among Hijras was found. The study results showed a negative correlation between parental support and condom use, and a positive correlation between parental controls and condom use. These indicated that parental support could improve condom use, and parental control indicated non-use of condom among the participants.

Our study results showed 15.9% of the prevalence of condom use among Hijras. Similarly, a study carried out in the city of Rawalpindi in 2005 reported 4% of condom use among Hijra sex workers [14].

The present study showed a negative correlation between parental support and problem behavior of having unprotected sex (condom use in the last sexual act). This indicated that Hijras receiving support and acceptance from their parents have lower chance of engaging in unprotected sex. Therefore, the odds of having sex without a condom were lower in Hijras supported by parents. Also, a study conducted in 2015 demonstrated that parental support reduces risky sexual behavior [15].

Parental control in Hijras leads them to run away from their families. They find refuge among Hijra community. Being a part of Hijra community, they get involved in sex work and dancing. As young Hijras in an already settled household, they have to follow the orders of their gurus, who act like their pimps, receiving a share of their earning. The association between parental control and unprotected sex indicates that higher parental control suppresses trans children, not being able to take their own life decisions. Wanting to dress and act like a woman, these children join Hijra community, and get involved in sex work. Being away from their family and not having any formal education, these people earn their living through sex work and dancing. While earning through sex work, their income depends on unprotected sex. They get paid less or lose their customers if they insist on having sex with condom, because hijras do not have a negotiation power. Similar results have been reported in other studies. A study in Karachi reported FSWs having high prevalence of unprotected sex due to lack of negotiation power [16]. In Canada, sex workers were offered more money for unprotected sex [17]. Moreover, a study from Australia reported that unprotected sex by sex workers was influenced by client's demand, higher payment for unprotected sex, and fear of losing clients [18]. The problem of unprotected sex due to financial restraints could be resolved through 100% condom use program, which has proved effective in eight Asian countries [19].

The results of our study did not show a significant association between expectation for affection and unprotected sex. This may be due to the fact that Hijra sex workers did not

openly share their feelings. Since they already face discrimination due to being homosexual, admitting to the fact that they want to be loved by men visiting them would lead to even further discrimination. This may be the reason behind insignificant association between expectation for affection and unprotected sex [8].

In the view of current pandemic of corona virus disease (COVID-19), the situation of this population would be worse. Majority of the population is untested, leaving HIV-positive Hijras without antiretroviral therapy [20]. People living with HIV are at a higher risk of contracting the virus, because of compromised immune system. This could also lead to higher stigma towards this population [21].

Limitations

Since Hijra sex workers form a key population, it was difficult to access them. They refused to cooperate at first. In order to gain their trust, we had to request a gatekeeper of this population. Gatekeeper was himself a transgender. The participants were visited at their deras at odd hours. The main difficulty faced during our data collection was security issue. Places where Hijras reside are not safe for girls to visit. The main threat include drug users and visiting customers. Therefore, we were accompanied by a gunman to ensure our safety. The Hijras were reluctant to tell us about their sexual practices, as they feared they would be exposed or arrested. Before every interview, confidentiality was ensured and the questionnaire was filled for educational purposes only. Some of the Hijras misbehaved with us and completely refused to cooperate. The gunman had to intervene in some places to ensure our safety. We managed to complete a sample size of 150 questionnaires, over the course of 2 and a half months. The Hijras were reluctant to share their sexual practices because of social stigma. This may have lead them to share socially desirable questions, introducing a bias into the study.

Conclusions

The prevalence of unprotected sex among Hijras residing in Rawalpindi is high, despite them having knowledge about HIV and its' prevention methods.

Parental control and parental support are associated with condom use in the last sexual act. The odds of having sex without condom increase as parental control increases, while the odds of having sex without condom decrease by increasing parental support.

Conflict of interest

The authors declare no conflict of interest.

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