

# New HIV Prevention Technologies: Knowledge and Perceived Usage by HIV-discordant and Concordant Couple with Risk Behaviour a Qualitative Study in Tamil Nadu. India

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## Abstract

New HIV prevention technologies include vaccines, microbicides, female condoms and others that may also provide protection from unplanned pregnancy and sexually transmitted infections (STIs). A qualitative study was conducted among HIV-discordant and HIV-concordant couples who were selected purposively from December 2012 to June 2014. The data were collected through in-depth interviews with HIV-discordant couples (n=8) and HIV-concordant couples (n=8). The couples were aware of all the risks involved in not using any prevention methods; some of them were able to mention about what they understood about a particular method, its usage, harm in not using, its availability and Government's role in promotion. The couples provided information on their understanding, availability and usage of male and female condoms, microbicides and HIV vaccine, their belief on male circumcision and views on PrEP. Their requirements for new prevention technology (NPT) and multiple prevention technology (MPT) were also elicited. The couples with risk behavior preferred having MPT that would prevent pregnancy, STIs and HIV, which would be of good quality, easily available and accessible.

**Keywords:** New HIV prevention technology, Microbicide, Pre-Exposure Prophylaxis

## 1. Introduction

The Indian epidemic is concentrated among vulnerable populations at high risk for HIV. The concentrated epidemics are driven by unprotected sex between sex workers and their clients, men having sex with men and by injecting drug use with contaminated injections. National AIDS Control Programme Phase-IV (2012-17) was launched in India to accelerate the process of reversal of the epidemic. It also aims to further strengthen the response to the epidemic in India with key strategies of intensifying and consolidating prevention services with a focus on high risk groups (HRGs) and vulnerable populations. HIV prevention technologies like male and female condoms are available as prevention choices since several years. Consistent and correct use of male condoms has been reported to be 87% effective for prevention of HIV but may be as low as 60% or as high as 95%. Several clinical trials reported protective effects of biomedical interventions in the form of gel and oral formulations of pre exposure prophylaxis (PrEP) but some trials were also stopped because they lacked efficacy. However, condom effectiveness rates could be lesser in real-life settings than those reported in these studies wherein research participants are more carefully educated on condom usage. Male condoms have been reported to be either un-accessed or under-utilized. For many women, the current prevention methods are inadequate since women often do not have the social or economic power to refuse sex or negotiate condom use. Studies in different countries show that, on an average, 50 -70 percent of male and female participants found the female condom to be acceptable. Cervical barriers, pre-exposure International Journal of Health Sciences & Research ([www.ijhsr.org](http://www.ijhsr.org)) 9 Vol.6; Issue: 1; January 2016 prophylaxis, HIV preventive vaccine and microbicide could also empower and enable women with better HIV prevention options that they could initiate themselves, without necessary knowledge, consent or involvement of their partners. Role of Male circumcision as a HIV prevention method for men has also been documented. In 2005, the first randomized efficacy trial of male circumcision for HIV prevention, conducted in South Africa, showed that circumcised men were 60 percent less likely than uncircumcised men to become infected with HIV from female partners. Thus although male and female condoms and adult male circumcision are cost effective methods for HIV prevention, their acceptability as prevention methods and correct and consistent use has always been a challenge. Worldwide, Antiretroviral pre-exposure prophylaxis (PrEP) for HIV infection had shown promising results. To help facilitate how to increase efficacy of PrEP rollout in India, a qualitative study was conducted to understand the needs and perceptions of the community including FSWs regarding PrEP in three states of Maharashtra, Karnataka and Tamil Nadu where HIV prevalence among FSWs has been recorded as 7.4%, 5.8% and 1% respectively [10]. New prevention technologies include vaccines and microbicides which might render protection against unplanned pregnancy, STIs, HIV and/or other common RTIs. Since it is important to understand the extent of knowledge about the new prevention technologies, a study was planned, among HIV-discordant and concordant with new infections are occurring within the marital and to find out their knowledge, beliefs, attitude, perceived usage and concerns

towards existing and new HIV prevention methods.

## 2. Methods

A qualitative study was conducted between 2013 and 2014 at 3 sites in India: Chennai (Tamil Nadu) to explore the willingness to use and accept the new HIV prevention technologies among the potential users in India. Purposive and convenience sampling techniques were used to recruit the participants and face to face interviews or group discussions were conducted. The participants were identified and recruited through Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs).

Interviews were conducted at place provided by the NGO/ CBO at their office. The location of the interview was a challenge for HIV-discordant and HIV-concordant couples because of fear of breach of confidentiality. Interviews with HIV-discordant and HIV-concordant couples were conducted either at an NGO office or at site office or a convenient place identified by the couples. Each interview required 3-4 visits for fixing appointment and finally interviews were conducted with the HIV-discordant and HIV-concordant couples which lasted from 40-90 minutes.

Eight In-depth interviews (IDI) were conducted with HIV-discordant and HIV-concordant couple (n=16). Written informed consent was obtained from every participant. To provide the background understanding of the subject, the participants received information on recent research findings pertaining to New HIV Prevention Technologies before conducting the interviews.

### 2.1 Study tools & data collection

The interview guide for the IDI focused on: perceived need for HIV prevention, attitudes and practices about family planning methods; knowledge and experiences of condom use for family planning and/ or prevention; knowledge, perception about STI and HIV/ AIDS, prevention methods, and usage modalities for oral PrEP. The guides were translated into local vernacular languages Tamil by the study site.

All the interviews were conducted by trained master's level social workers in the local language in Tamil. Field notes were taken during or soon after the IDIs. The data was audio recorded and data collection was continued until theoretical saturation was reached.

## 3. Data analysis

The audio data was transcribed verbatim, translated into English and typed in Microsoft Word at the study sites. The processed translated electronic data from the sites were received at main coordinating site where two researchers and the principal investigator (PI) individually and repeatedly reviewed the interviews. Repeat interviews were requested from the sites in case of missing information or if there was need for new information. The repeated sections underwent a similar process of data processing and finalized data was entered in qualitative software ATLAS ti version.7. Attributes were tabulated in the software to quantify demographic variables of location, typology, age and marital status. Data was coded to recognize similarities and differences using constant comparison methods. Firstly, the themes were identified deductively from the interview guide and inductively from the data. Following the iterative process of reading, final themes were developed using the grounded theory approach. Data was coded by two researchers, first independently and then discussed together. The codes and the descriptors were shared with the site PIs and their interpretations were included to preserve the local meanings. The coded data was analyzed which informed the next iteration of data collection until strong theoretical understanding was attained and these are described as emerging themes. Thematic analysis was performed to analyze the data pertaining to attitudes and practices about family planning methods; knowledge and experiences of condom use for family planning and/ or prevention; knowledge, perception about STI and HIV/ AIDS, prevention methods, and usage modalities for oral PrEP.

## 4. Result

The results of IDIs by 4 HIV-concordant and 4 HIV-Discordant are presented here. The views of the respondents of various prevention technologies are given below:

### 4.1 Condoms (Male and female condoms)

All the HIV-concordant and HIV-Discordant were had knowledge on condom usage and its role in prevention of child birth and HIV/AIDS. Majority of HIV-concordant and 4 HIV-Discordant mentioned that they were aware of male condoms and another HIV concordant and HIV Discordant were aware of female condoms and all were mentioned that female condoms were better than male condoms and safer for the partner. HIV concordant and HIV Discordant stated that these condoms were available in medical shops, NGOs and some hospitals; and also they were costlier and not available everywhere. However all the HIV concordant and HIV Discordant informed that male condom is available everywhere; the HIV concordant couples were mentioned that Government condoms were of low quality. Most of the HIV discordant informed that condoms bought privately

were of good quality. All of them mentioned that whoever is involved in sex work, must use condom. HIV concordant couples were informed that they liked to use condom for its colour, fragrance and good quality. Most of them informed that they were not interested to use Government condom because of the smell and chances of easily getting torn. HIV concordant couples were informed that after drinking their clients forced them to drink and have sex without using condom or refused to use condom themselves. Some couples were informed that their clients refused condom usage as they were not satisfied with the sex.

***Some of their views are given here***

*“HIV spreads through sexual relationship and some other tell that it spreads through infected HIV people’s saliva and also through air.....”*

*“Condom is easy to use....” “It depends on the individuals mind set...” “Only when they know that they or their partner is infected they use condom otherwise they do not, some tell it is tearing in the middle but I have seen so.....”*

*“Condom usage is good...” “Because condom prevents from HIV to both and children also....”*

*“Drunken people would not use it....”*

*“There is no problem by using us did not get any ulcer....” “It is easily available everywhere”*

*“Many methods are there if these methods are used, I think we can prevent this disease to some extent.....”*

**4.2 Microbicides**

HIV concordant and discordant couples were informed that microbicide was a HIV prevention product and only one couple were informed that using microbicide is to prevent infection; HIV discordant couples were informed that the product should have consistency of a gel and should be good and easy to use; HIV concordant couple mentioned that men would use it during anal sex and oral sex with MSM (Men having sex with Men); All of them mentioned that microbicide could be used as a medicinal product and few others felt that they are hygienic products. As far as its duration of protection was concerned, most of them said it would last for half an hour and few mentioned that its side effect would be a barrier; HIV concordant couple mentioned that Government should promote microbicides through NGOs and TV advertisements

***Some of their views are given here:***

*“According to couples mentioned that, “tablet is best, people will use it .....”*

*“Even injection taken continuously, it can damage all body parts.....”*

*“Vaccine could be made compulsory by govt law in such case; it would be definitely used at least for children so it is good.....”*

**Interview with Couple:** All of couples reported that wife insist to use the condom, All the couples were not have conversation, All the couples have discussion on safer sex deciding to use of HIV prevention

***Some of their views are given here:***

*“I told my partner that always use condom when he wants to have sex.....”*

*“Both husband and wife to accept and use prevention method for the safety of both now, I became very weak by increasing viral load.....”*

*my husband calls me and says that why can not we live like other couples.....I insists him to use condom during sex, for family planning- mostly everyone will accept the family planning operation after two children born, parents and in laws opinion is needed ..Couples alone decide for HIV, STI prevention.....*

**4.3 NPT (New Prevention Technology)**

Both HIV discordant and HIV concordant mentioned anything about NPT and also answered “yes” for the need for HIV prevention. Most of the couples preferred that new prevention method should be a medicinal product. The HIV infected and affected women informed that, NPT is a necessity as husband refuse to use condom during sex; they preferred it to be medicinal type.

***Some of their views are given here:***

*“The new prevention product is very much necessary because gents refuse to use condom during sex.....”*

*“If this product comes in medicinal type, then it will be good and easy to use*

*without others knowledge....”*

#### **4.4MPT (Multiple Prevention Technology)**

HIV discordant and concordant couples stated that MPT prevents from three things which are, child birth, HIV and STI. Most of the couples informed that they would expect that before and after family planning operation, MPT will be used to prevent HIV/STI and conception. All couples were mentioned that Government should promote MPT through advertisement given through TV, News paper, street theater, NGOs and hospitals. They felt that it could easily reach the public through the doctors and Government; similarly Government should promote MPT awareness through NGO. One of HIV infected women opined that this method could be reached to the public easily through the doctors; and the Govt. should make efforts to create awareness through T.V.

#### **Some of their views are given here:**

“Sex workers definitely use it....”

“If MPT is a prevention method, it is useful for the prevention of all the three HIV/STI and pregnancy...”

“I will use it for HIV prevention.....and also for.....pregnancy...”

“It could be easily reached to the people”

### **5. Discussion**

Heterosexual transmission is responsible for 87.4% of all HIV-1 transmissions in India [13]. The risk of HIV transmission between HIV sero discordant married couples is highly variable and reflects the interplay between biological, genetic, immunological factors along with the various socio behavioral factors. Forty-seven percent of sero discordant couples in this study used condoms which were high compared to the national data of 6% (as per National Family Health Survey [NFHS-III]) [14]. Female condom programmes have worked by emphasizing the use of female condoms for contraception and by promoting their use in loving relationships [15]. In the present study some of the couples were aware of its prevention role and some mentioned that female condoms are better than the male condoms. However, some did not prefer female condom as it is costlier, uncomfortable and it may lead to development of rashes or some similar complaints. PrEP's HIV preventive role and usage by female sex workers and transgender have been mentioned by some of the women participants of the current study. Antiretroviral pre-exposure prophylaxis (PrEP) reduces the incidence of acquisition of human immunodeficiency virus type 1 (HIV-1) in men who have sex with men and is a promising approach for preventing HIV-1 in heterosexual populations, by another study [16]. In the present study, some participants felt that it is very difficult to take the tablets significance regularly due to forgetfulness and the perceived concern that PrEP will increase body heat and could cause white discharge. We have entered a new era in HIV prevention whereby options have expanded following advances in biomedical discovery. The real challenges are at the level of implementation, effectiveness, and the effect of combinations of various prevention options at the population level. However, gaps in the knowledge and implementation challenges persist [17].

### **6. Conclusion**

Most of the couples were aware of the existing HIV prevention technologies and few have not even heard of some of the new prevention technologies. They had varied perceptions on the different prevention technologies. However, the study findings emphasized the need for new MPT (Multiple prevention technology), which could protect many men and women involved in high risk behavior HIV infected and affected women, against pregnancy, STIs and HIV; the MPT should be of good quality; and should be easily available, affordable and accessible.

### **7. Limitation**

Since we are finding out details in-depth on HIV prevention method, the data can be used as descriptive and not as representative. The results of this study cannot be generalized to others of the same category.

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