



A STUDY ON FAMILY PLANNING METHODS AMONG HIV SERO DISCORDANT COUPLES IN KARNATAKA

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ABSTRACT

Introduction: India has third largest number of people living with HIV/AIDS in the world. Sero-discordance in couples refers to two people (One HIV positive and other negative) who are in ongoing sexual relationship in which both partners have tested for HIV and there has been full disclosure of HIV status. This study aims to understand planning methods and adherence to ART treatment among HIV sero-discordant couples in Karnataka.

Methods: A cross sectional study was conducted in Karnataka from Apr to September 2015 .A total of 314 sero-discordant couples enrolled in PLHIV Networks for HIV care and support services in 4 sites of Karnataka were selected for the study .

Results: Majority (79%) of sero-discordant couples have adopted sterilization method of contraception. The condom usage (12%) and copper-T(2%) methods were pretty low. Adherence to ART ($\geq 95\%$) among sero-discordant couples was high at 94.6%. PLHIV with a spouse having higher educational status were better adhering to ART on comparison with spouse of lower educational status. This difference was statistically significant ($P<0.01$).

Conclusion: The study shows that the HIV sero-discordant couples are using sterilization methods more in comparison to other family planning methods and are highly adherent to ART.

Key Words- HIV, Serodiscordancy, ART Adherence, Karnataka

INTRODUCTION

India has the third largest number of people living with HIV/AIDS in the world (NACO) ¹. Among its six high-prevalence states, Karnataka is ranked the fourth in India, with an estimated HIV prevalence among antenatal clinic attendees of 1% and among STI patients of 7.57% (NACO) ¹. Karnataka is estimated to have 250,000 persons living with HIV. Sero-discordance in couples refers to two people (One HIV positive and the other HIV negative) who are in an ongoing sexual relationship in which both partners have tested for HIV and there has been full disclosure of HIV status ². The role of both the partners in practicing HIV prevention measures and helping each other contributes to maintain health and the sero-discordant status. The

success of a HIV prevention program depends upon effective interventions to reduce HIV transmission between sero-discordant couples^{3,4}. Studies have documented that un-protected sex continues among sero-discordant couples which is one of the important ethical and social issues in the community, which has an important role in HIV Programs ⁵.

The success of Anti Retro Viral Therapy and prolongation of life of a HIV infected individual depends upon adherence to prescribed regimen of Anti Retro Viral Therapy (ART)^{5,6}. A good adherence to ART treatment reduces the chances of HIV transmission, and for a serodiscordant couple, along with other positive prevention measures ART adherence helps them to prevent HIV trans-

mission and maintain sero-discordancy^{5,6,7,8,9}. A study on sero-conversion in Henan province of China, reported a sero-conversion rate of 1.71 per 100 person-years¹⁰, while one of the studies from south India, reported a sero-conversion rate of 6.52 per 100 person-years⁴. A study from France reported that factors associated with unsafe sex among sero-discordant couples are gender specific, and the same study reported that 26% of the men and 34 % of the women PLHIV were involved in unsafe sex with their regular partners¹¹.

There is still paucity of information among these specific profiles that are vital to understand, develop and refine the strategies to bridge the gaps among serodiscordance among PLHIV couples and associated determinants. This study aims to understand planning methods and adherence to ART treatment among HIV sero-discordant couples in Karnataka.

The objectives of the study were to study planning methods among HIV sero-discordant Couples in Karnataka and to know the adherence to Anti Retro Viral Therapy (ART) among HIV sero-discordant couples in Karnataka.

METHODOLOGY

A cross sectional study was conducted in Karnataka for 6 months duration (Apr 2015 to September 2015). Since this study was focusing on a selected sub group of PLHIV population, in order to have a sufficient sample frame, participants were selected from 4 sites of Karnataka namely Bangalore Urban, Bangalore Rural, Tumkur and Kolar. PLHIV who were in sero-discordant relationships, enrolled in Dist Level PLHIV Networks for HIV care and support services among these 3 sites were studied during the study period.

A total of 314 sero-discordant couples selected for study and were recruited with the help of peer groups while seeking care and support services in Dist level PLHIV networks.

Sero-discordant couples who were married and or cohabiting together with full disclosure of status were included for the study. Couples where in index PLHIV was seriously ill or bed ridden were excluded from the study.

A pretested structured interview schedule was used for data collection. The tools were translated into local language, and then pretested before adopting for data collection. Selected PLHIV community interviewers were oriented on the protocols of the study including subject enrolment procedures, consent process and the instrument. Index (HIV infected) person among the sero-discordant couples were interviewed ensuring auditory and

visual privacy after obtaining a written informed consent.

The data analysis was done using SPSS (Statistical Package for the Social Sciences) for Windows, version 17. The study was approved by the Institutional Ethical committee.

RESULTS

Among the 312 participants 22.9% were between 21-30 years while 48.7% were aged between 31-40 years and remaining 27.3% were above 41years. The mean age was 37 years (SD: 37+ 7.036) which ranged from 19 to 64 years (Mean age for men was 38.4 yrs & 31.6 for women). In educational status, 21.9% of study populations were illiterates, where majorities (64.3%) have completed primary and secondary education. The graduates and postgraduates were pretty low (13.6%).

Table-1: Age grouping and Education status of study population

Variables	Frequency (n=314) (%)
Age Group	
< 20 Years	3 (0.96)
21 - 30 Years	72 (22.93)
31 - 40 Years	153 (48.73)
> 41 Years	86 (27.39)
Education	
No Formal Education	69 (21.97)
Primary Education	77 (24.52)
Secondary Education	125 (39.81)
Graduates/ Postgraduates	43 (13.69)

Table 2: Desire for Children among participants

Desire for Children	Frequency (n=314) (%)
Yes	68 (21.65)
No	246 (78.34)

Table 3: Method of contraception adopted by Sero-discordant Couples

Method Adopted	Frequency (n=314) (%)
Condom	40 (12.42)
Copper T	6 (1.91)
Sterilization	249 (79.29)
Missing	19 (6.38)

Adherence to ART (Above ≥ 95% doses) among sero-discordant couples was high at 94.6%. PLHIV with a spouse of having an higher educational status were found to be better adhering to ART while compared to those with a spouse of lower educational status; and this difference was found to be statistically significant (P<0.01)

Majority (78%) of study population did not have the desire for children because of fear of HIV

transmission and stigma associated with the disease.

Majority (79%) of the sero-discordant couples have adopted sterilisation method of contraception. The condom usage method is low (12%) and Copper-T method is pretty low (2%) for contraception methods; Lower proportions of condom use with spouse were reported among those who have adopted permanent methods of contraception.

DISCUSSION

Our study shows that the PLHIVs who are in sero-discordant relationships are using sterilization methods more in comparison to other family planning methods and are highly adherent to ART. The findings fulfil the objectives of the study.

A study from Sub Saharan Africa showed injectable contraceptives were the most popular method, while sterilization, implants and IUDs were used less frequently¹².

The high ART adherence will result in reduction of HIV infection among sero-discordant couples.

A higher number of PLHIV in the elder age groups reported not using condoms with spouse compared to younger ones. Lower proportions of condom use with spouse were reported among those who have adopted permanent methods of contraception.

The study also shows education of index partner as well as spouse plays important role in the adherence to ART treatment; this shows that having a partner who is literate and well educated is beneficial for a PLHIV to know the importance of ART medication and adhere to prescribed treatment.

Having child in the family was positively associated with having a better adherence with ART Medication; these findings need a more detailed qualitative understanding.

ART can reduce the amount of virus (viral load) in the bodily fluids of an HIV-positive partner to very low levels and this can dramatically reduce a couple's risk of HIV transmission. HIV prevention may also be easier for individuals in *stable* sero-discordant relationships compared to those who are in more casual relationships.

Antiretroviral therapy has dramatically improved survival of people living with HIV by suppressing viral replication¹³. Consequently, as a result of viral suppression, ART also plays a major role in prevention of HIV transmission. The HIV viral load has been shown to be one of the strongest determinants of HIV transmission - the higher the viral load, the higher the risk of transmission¹⁴. There-

fore, initiating ART is an effective means of reducing risk of transmission among individuals in discordant couples. Various studies have shown the effectiveness of ART in preventing HIV transmission in sero-discordant couples^{15,16,17,18} and¹⁹. ART use by index partners could reduce HIV transmission in sero-discordant couples, and the effectiveness of this prevention strategy could be further increased with consistent condom use²⁰.

Interventions targeting individuals in sero-discordant relationships can be broadly classified as interventions targeting the uninfected partner that minimizes risk of acquisition (e.g., PrEP) or interventions targeted towards the infected partner to minimize risk of transmission (e.g., antiretroviral therapy) or interventions that can be targeted at both partners (e.g., condom promotion)⁶.

Voluntary counselling and testing, risk reduction counselling and condom promotion should definitely be promoted as a first-step in the control of transmission of HIV among persons in discordant relationships. The National AIDS Control Programme of the country should focus on these aspects among sero-discordant couples to improve their quality of life.

CONCLUSION

The study shows that the HIV sero-discordant couples are using sterilization methods more in comparison to other family planning methods and are highly adherent to ART. This study finding needs to be explored further with large scale studies in different settings.

LIMITATIONS

Since similar type of studies on planning methods of HIV sero-discordant couples was scanty, comparison with other studies on planning methods was not possible.

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