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RISKY SEXUAL BEHAVIOURS AMONG HIV SERO-DISCORDANT INDIVIDUALS ATTENDING DEFENCE FORCES MEMORIAL HOSPITAL IN NAIROBI, KENYA

J. M. Orina, BScN, Programme Coordinator, Defence Memorial Hospital, F. M. Kyallo, BSc, MSc, PhD, Egerton University, J. Mutai, PhD, Senior Researcher, Kenya Medical Research Institute (KEMRI), Centre for Public Health Research (CPHR) and D. G. Magu, BScN, MPH, PhD, Lecturer, Jomo Kenyatta University of Agriculture and Technology, Department of Community and Public Health, P.O. Box 62000-00202, Nairobi, Kenya.

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J. M. ORINA , F. M. KYALLO, J. MUTAI, and D. G. MAGU

ABSTRACT

Background: HIV/AIDS pandemic is a great public health concern hence the need to identify interventions to prevent new infections among risk groups.

Objective: To determine risky sexual behaviours among HIV sero-discordant individuals attending Defence Forces Memorial Hospital (DFMH).

Design: A descriptive cross-sectional study

Setting: Defence Forces Memorial Hospital (DFMH) Nairobi.

Results: Eighty eight point six per cent (88.6%) study participants used condoms regularly during sexual intercourse with their partners, with a large number (95.7%) of those who did not use condoms citing less pleasure or discomfort during sex as their main reason. Most of those with multiple sexual partners (76.1%) had used a condom 12 months prior to the interview while 23.9% had had sex without condom use. Fifty eight (17.8%) participants engaged in sexual intercourse with other partners while deployed away from their families while most of them (82.2%) did not.

Conclusion: There is need to enhance HIV interventions and preventive strategies among special risk groups in the society.

INTRODUCTION

HIV/AIDS remains a major public health concern with the sub-Saharan Africa region as the home to almost 70% of all HIV infected. Approximately 35.8 (32.2-38.8) million people infected globally, 2.3 (1.9-2.7) million newly infected and an estimated 1.6 million people dead due to AIDS-related illnesses by 2012(1).

In sub-Saharan Africa, a significant proportion of new HIV infections occur within cohabiting individuals(2) and married HIV-discordant individuals(3,4). Studies from SSA region show that between 30-50% of married HIV infected individuals have an HIV uninfected spouse, with new cases of HIV infection increasingly occurring among these relationships(5-7). A longitudinal study on HIV-1 transmission within marriage in Rural Uganda showed that 10.5% of the study participants were HIV sero-discordant(3). These relatively high rates of HIV infection among sero-discordant individuals is supported by findings from other studies in Rwanda and Zambia showing that about 55-93% of new heterosexually acquired HIV infections occurred within stable partnerships (9,10). According to the Kenya AIDS Indicator Survey (KAIS) Preliminary

Report, 5% of those individuals where both partners had HIV test results had a sero-discordant status which corresponded to an estimated 260,000 individuals (11). The statistics were lower compared to the KAIS 2007 report that indicated the percentage of sero-discordant individuals at 6%.

Risky sexual behaviours still remain a great challenge in combating the spread of HIV especially among at risk groups that includes uniformed personnel and sero-discordant individuals among others. An ecological analysis on HIV/AIDS in African militaries clearly indicated that the prevalence rates in most of these militaries are significantly elevated compared to their host communities (12). Peacekeeping operations worldwide tend to exacerbate the spread of HIV whereby peacekeepers could be a source of infection to the local populations or be infected by them in turn, becoming a possible source of infection when they return home. Military personnel therefore play a significant role in the spread of HIV among its personnel and the general population which could in turn lead to an increase in number of HIV sero-discordant individuals. In the Kenyan military, HIV sero-discordant individuals face similarly unique challenges due to the nature

of their working environment. Knowledge about the transmission, risky behaviour practices and poor attitudes portrayed amongst HIV sero-discordant individuals need to be explored. The limited information among HIV discordant couples is a major barrier to developing effective interventions. Such strategies can support positive behaviour and attitudes such as increased condom use, decreased unsafe sexual behaviour and decision making in relevant issues with regard to HIV prevention. Findings from this study will guide the formulation of policies for individuals in a HIV sero-discordant relationship in Kenya.

Despite having limited data on HIV sero-discordance, there is also limited knowledge on how to deal with 'discordance'. Additionally, the HIV negative partner in a HIV sero-discordant relationship is at an ever increasing risk of acquiring HIV infection from the HIV positive partner further compounding the situation.

This study therefore seeks to provide evidence based data to policy makers to improve preventive strategies, care and management and further minimize the spread of HIV among sero-discordant military personnel and to the civilian population in general.

The general objective of this study is to determine risky sexual behaviours among HIV sero-discordant individuals attending Defence Forces Memorial Hospital (DFMH).

The study aims to provide information on risky sexual behaviours, HIV status disclosure and factors associated with disclosure among sero-discordant clients at the military. It will also generate findings that will provide a basis for the development of prevention and treatment policies regarding HIV infected sero-discordant persons for more extensive and longer-term interventional studies.

MATERIALS AND METHODS

The study will be conducted at the Defence Forces Memorial Hospital's Comprehensive Care Centre (CCC) that is located approximately 15 kilometers from the city centre, Nairobi (which is the Kenyan capital city), along Mbagathi Road off Ngong Road.

This will be a cross-sectional descriptive study. The study involved approximately 420 HIV sero-discordant clients attending the CCC at DFMH and who will be recruited as individuals into the study.

Sample size determination: Sample size was determined using a formula (as recommended by Fisher *et al.*, 1998)

$$n = z^2 \frac{pq}{d^2}$$

n = desired sample size

z = standard normal deviate which is equal to 1.96 corresponding to the 95% confidence limit.

p = prevalence of discordant individuals was hypothesized to be assumed 50%

$$p = 0.5$$

$$q = 1.0 - p = 0.5$$

6

d = the confidence limit of the prevalence (p) at 95% confidence interval

$$= 1 - \text{Confidence interval}$$

$$= 1 - 0.95$$

$$= 0.05$$

Degree of accuracy desired for the study was hence set at 0.05

Thus

$$n = \frac{1.96^2 \times 0.5 \times 0.5}{(0.05^2)}$$

$$n = 384$$

Sampling Procedure: A systematic random sampling criterion was used, to achieve the nth among the 384 participants.

Pre-Testing the Questionnaire: The data collection tool was subjected to a pre-testing at Thika Partners in Prevention CCC among individuals in a sero-discordant relationship enrolled for care.

Data Collection: Data collection was done by use of structured questionnaires ensuring high level of privacy and confidentiality. To collect qualitative data regarding attitude and practices a focus group guide was used.

Data Storage: The data collected were entered into a computer database designed using MS-Access application. Data cleaning and validation was performed to achieve a clean set that was exported to Statistical Package for Social Sciences (SPSS) Version 21.0. The information was coded and password protected whereas filled questionnaires will be arranged in folders and properly kept in lockable drawers for confidentiality.

Data Analysis: Data from the MS-Access database was analyzed at the Data Centre, Department of Defense (DOD), using the SPSS Version 21.0 program. Descriptive statistics was used to analyze continuous and categorical variables. Pearson's Chi-square test of association between independent and dependent variables was used and level of significance was 0.05 (p=0.05) at 95% confidence interval.

RESULTS

Majority of the participants (88.6%) used condoms regularly during sexual intercourse with their partners and a large number (95.7%) of those who did not use condoms cited less pleasure or discomfort during sex as their main reason for not using. Others believed that they were being protected by God (2.9%) during sex while few others (1.4%) believed they had

natural immunity against the disease. Participants who had had sex with their spouse in the preceding 12 months before the interview were 27.2% and majority of them (72.8%) had used condom during that period. Majority of the participants (86.7%) had no other sexual partners apart from their spouse while 13.3% had other sexual partner apart from their spouse. Most of those with sexual partners other than their spouses (76.1%) had not had sexual intercourse with them without condoms 12 months prior to interview while few of them (23.9%) had had sexual intercourse without condom use.

The deployment away from family affected majority of the study participants (71.7%) in meeting the sexual needs of their spouses while family staying away from the subject's work station did not affect about 51.0% of the study participants. The longest duration for the majority of the study participants to have been deployed away from their family were three to six months indicated by 65.4% followed by seven to twelve months with 23.5% of the participants then one to two years with 8.6%. Participants who had been deployed for more than four years were very few (2.5%). During the time of deployment away from their families, 257 (82.2%) of the participants did not engage in sexual intercourse with other partners apart from their spouse while 58 (17.8%) of the participants did.

Participants who had got sexually related infection were 36.4% while those who had not were 63.6%.

DISCUSSION

Majority of the participants (88.6%) used condoms regularly during sexual intercourse with their partners. This is supported by findings of a comparative study in Southern India that showed HIV sero-discordant patients were more likely to use condoms with their spouses than concordant patients (49% versus 28.8%; $P=0.01$)(13). A significant number (95.7%) of those who did not use condoms cited less pleasure or discomfort during sex as their main reason for not using. Findings of a Jeevan Saathi study in India support this by showing that approximately 10 % of couples reported inconsistent condom use in the past 3 months and 20 % reported intimate partner violence (IPV)(14). 76.1% with multiple sexual partners had sexual intercourse with a condom while few of them (23.9%) had had sexual intercourse without condom use. This finding is supported by evidence of studies that showed that the use of condoms may be low or irregular in different sexual practices of PLHIV (15) and that sero-discordant couples have greater compliance than the general population, though it varies from 39.2% in sero-discordant couples in general, reaching 78.5% in sero-discordant couples where the woman is seropositive (16,17).

During the time of deployment away from their families, 257 (82.2%) of the participants did not engage in sexual intercourse with other partners apart from their spouse while 58 (17.8%) of them did. Evidence from an epidemiological study among US Air Force concluded that the highest risk of HIV infection in the USAF was among young unmarried deployment-naïve males, especially those in higher risk occupation groups(18).

Participants who had got sexually related infection were 36.4% while those who had not were 63.6%. Evidence from a study in the French Forces support this finding by showing that the incidence of STD and HIV seroconversion was respectively 19.2 and 2.8 cases per 100,000 and concluded that STD and HIV seroconversion remain a subject of concern for the French Medical Forces despite low rates of incidence(19). Another study among Serbian Armed

Forces found 36 out of 5617 soldiers to have some form of STD (20).

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