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DETERMINANTS OF DISCLOSURE ON HIV SERO-STATUS AMONG PEOPLE LIVING WITH HIV AND ON ANTIRETROVIRAL TREATMENT AT MOMBASA COUNTY REFERRAL HOSPITAL, KENYA

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ABSTRACT
It is estimated that Kenya has 1.6 million people living with HIV and 88,000 new adult infections annually. The objective of this study was to explore the level of HIV sero – status disclosure and the disclosure outcomes among PLHIV on ART treatment. A cross-sectional study design was employed. Quantitative and qualitative data was collected. Univariate and multivariate analyses were performed using SPSS version 20, frequencies generated for categorical variables and comparison between proportions examined using Chi– square test. A sample size of 432 was arrived at using Cochrane's formula. Simple random sampling was used to recruit the subjects and all signed a written informed consent. The quantitative results showed 174 (40.3%) of the subjects were male and 258 (59.7%) female. The mean age was 35.0 years. The overall disclosure rate among PLHIV was 79.2%. Key determinants of disclosure were disease transmission (AOR 21.125; 95% CI 6.942-64.286), unfaithfulness (AOR 7.133; 95% CI 3.713-13.628) and consistent condom use (AOR 5.619; CI 2.659-11.873). Qualitative findings on disclosure perceptions showed 42.78% good, 32.97% low self esteem, 17.3% quilt and 6.22% shame. The study realized 46% of PLHIV were not aware of their spouse HIV status despite being on care.
KEYWORDS: *Disclosure, Sero-status, Kenya*

INTRODUCTION
Human immunodeficiency virus and acquired immune deficiency syndrome (HIV and AIDS) is a disease spectrum of the human immune system (Markowitz *et al*, 2006). The disease prevention practices involves the use of antiretroviral (ARVs), prevention of mother to child transmission (PMTCT), safe sex practices, voluntary counseling and testing (VCT) in order to reduce new HIV infections (Stirrat *et al*, 2006). HIV and AIDS portray both physical and economic impacts to the society (Kallings *et al*, 2008). It is still a taboo for some communities to discuss HIV status, which place them at a higher risk of acquiring the disease (Kalichman *et al*, 2014).

Sub - Saharan Africa is the region most affected with HIV and AIDS, with estimated 68% (22.9 million)

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of all HIV cases and 66% of all HIV related deaths in 2010. This means that 5% of the adult populations are infected. Kenya has a population of 1.6 million PLHIV (5.9% prevalence), 62,000 new infections and 36,000 AIDS related deaths with adult prevalence and incidence rate of 5.4% and 11% annually. Mombasa County has a prevalence of 11.1% (54,670) PLHIV and 1,600 annual incidences. The women are more affected (60% of all cases). Overall HIV disclosure rate globally stands at 39.5–97% while in Kenya, disclosure stands at 70-80% among sexual partners and 11- 26% in children.

OBJECTIVES

General objective

To explore the determinants of HIV sero-status disclosure among PLHIV receiving treatment and care at MCRH

Specific objectives

(i) To determine the level of HIV sero-status disclosure among PLHIV at MCRH
(ii) To establish PLHIV preferred HIV sero-status disclosure party at MCRH
(iii) To identify disclosure perception among PLHIV at MCRH
(iv) To determine PLHIV knowledge on spouse HIV sero-status and disclosure preparedness at MCRH
(v) To establish HIV sero-status disclosure outcomes among PLHIV at MCRH

METHODOLOGY

The study adopted descriptive cross sectional study. Structured questionnaires were administered face-to-face by the research assistants. Structured interview guide were administered and data recorded using a tape recorder. Focused group discussion sessions were carried out among the health workers and PLHIV

SAMPLING DESIGN

The study employed probability sampling considering it allows for a much more representative sample and generalization of findings, it enables the estimation of sampling error and calculation of differential statistics. Simple random sampling was used to recruit the subjects into the study via their routine clinic visits. The labeled (Yes and No) and folded papers were issued to the subjects. Those who picked a Yes paper were enrolled in the study. They were taken through the research purpose, objective, rights, risks, benefits and confidentiality before consenting.

STATISTICS DESIGN

Sample size was calculated using the Cochran's formula (Cochran's, 2010), where the population is at least 10,000.

$$n = \frac{z^2 p(1-p)}{\alpha^2}$$

$$n = \frac{1.96^2 \times 0.49 \times (1-0.49)}{0.05^2} = 384$$

Then addition of a 10% non response rate was added giving a final sample size of 432.

The collected data was edited for reliability, consistency and accuracy then coded and entered to Statistical Package for the Social Sciences (SPSS) version 20 for analysis. Frequency tables were generated for all categorical variables and comparison between proportions examined using descriptive statistic and cross tabulation. Disclosure of HIV status was be set as dependent variable (outcome) in analysis. A bivariate analysis was done to determine the presence of a statistically significant association ($p<0.05$) between independent variables and the dependent variable. Multivariate logistic regression models were built to identify independent determinants of HIV status disclosure. Both adjusted and un-adjusted odds ratio were reported with their corresponding 95% confidence intervals. All the analyses were two tailed and significance level set at 5%.

GEOGRAPHICAL AREA

The study was carried out in Mombasa County Referral Hospital. Mombasa is one of the oldest towns in the Kenyan coastal region and the smallest county (in size) in Kenya. Initially it was one of the former districts before, being reconstituted to a County in 2013. It is the smallest County in Kenya, covering an area of 229.7 km^2 excluding 65 km^2 of water mass. It borders Kilifi County to the North, Kwale County to the South West and the Indian Ocean to the East.

It's a rich tourist hub, with a population of 939,370 as per the 2009 census. The town is situated in an island and surrounded by Indian Ocean. It is separated from the mainland by two creeks: Tudor creek and Kilindini harbour. It is connected to the mainland to the north by the Nyali Bridge, to the south by the Likoni ferry and to the west by the Makupa causeway, alongside which runs the Kenya - Uganda railway.

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Mombasa has a cosmopolitan population, with the Swahili and Mijikenda being predominant. Other communities include the Akamba, Taita, Asians, and people from upcountry as well as tourist immigrants. The common religions are Islam, Christianity and Hinduism. The county has one referral hospital, three sub county hospitals, 15 private hospitals and 25 dispensaries. The top ten diseases causing morbidity and mortality in Mombasa County are malaria, acute respiratory infections, pneumonia, diarrhoea, anemia, STIs/HIV/AIDS, pregnancy complications, tuberculosis, hypertension and accidents (KNBS, 2009). Mombasa county has got the highest HIV/AIDS prevalence 58,100 (11%) compared to neighboring counties Kwale and Kilifi having 21,159 (5.7%) and 22,606 (4.4%) respectively (KAIS, 2012).

RESULTS

The study enrolled 432 persons living with HIV where a total of 257 (59.5%) females and 175 (40.5%) male participants. Majority of the study participants were married 175 (36.3%) followed by widowed/divorced/separated 146 (33.8%). A large proportion of participants, 246 (57%) reported a monthly income of less than Ksh. 10,000. About 287 (66.4%) to participants had gone past primary education and almost half of them, 264 (61.1%) were Christians. Most of the study participants belonged to the age group of 29-38 years (32.2%) and the overall mean age was 42 years (Standard deviation 9.9). Men were significantly older [44.8 years (SD10.3)] than that of female (40.6 (SD 9.6)), $p<0.364$.

The level of disclosure varies depending on disclosed parties. The study findings show disclosure to 1-2 persons (52%), 3-4 persons (22%), >5 persons (5%). This shows that half (52%) of the participants had managed to disclose their status to the closest person (s) only. The study found out that the great fear of disclosure among 90 (21%) undisclosed group include gossip 40 (44%), blame 25 (28%), lose of support 15 (17%) and violence 10 (11%)

The study realized 186(42.78%) to have good perception, 143 (32.97%) low self-esteem, 75 (17.03%) guilt and 28 (6.22%) shame. About 75% of the disclosed group had positive perceptions to disclosure. The study found out 364 (84.3%) participants had one sexual partner. Currently, 53% (193) had multiple sexual partners (>1) while 67.3% (245) have had multiple sexual partners in the past.

CONCLUSION

This study reveals that the overall disclosure rate among PLHIV is 79.2% while 40.5% do not know the HIV status of their sexual partners. Disclosure rate was higher in female than males. The findings show that proper patient preparedness to disclosure and knowledge of spouse being important determinants to disclosure.

The study realized that blame of causing family shame, source of infection and infidelity to a major hindrance of disclosure among many. Stigma was still a setback to many in facilitating disclosure. However, stigma level declines with counseling, duration of diagnosis and preferred disclosure party.

The presence of disclosure support group within amongst the PLHIV and healthcare providers' assistance is vital to many as they can share their experience on disclosure; explore disclosure methods and timing amongst themselves. The study found out that faithfulness in relationships and behavior of consistent condom use among the participants with their sexual partners to promote trust among PLHIV and it makes disclosure easy.

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FIGURES AND TABLES

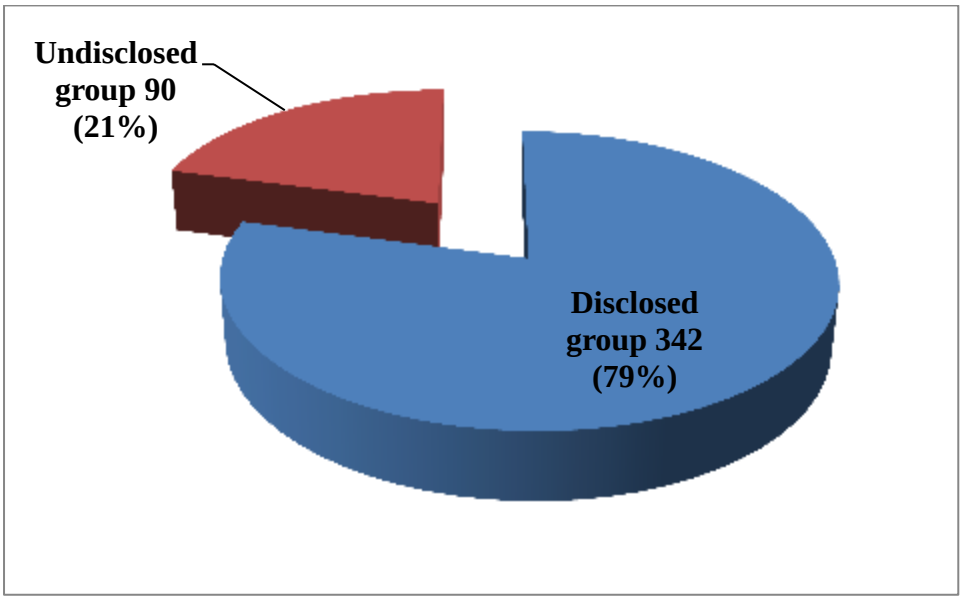

Figure 1: Proportion of HIV disclosure

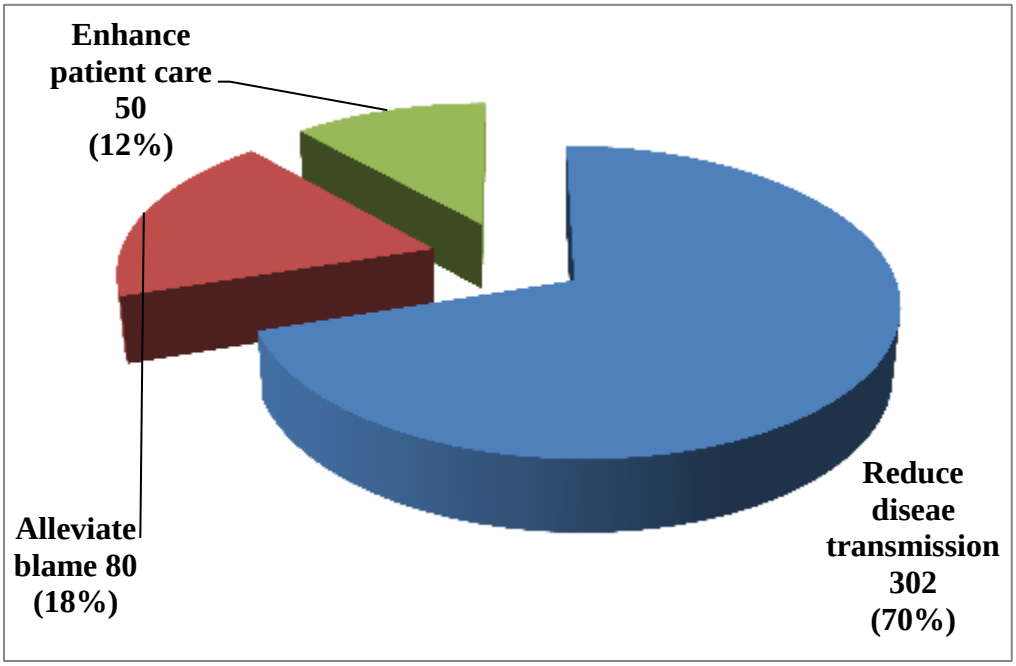

Figure 2: Proportion of disclosure benefits

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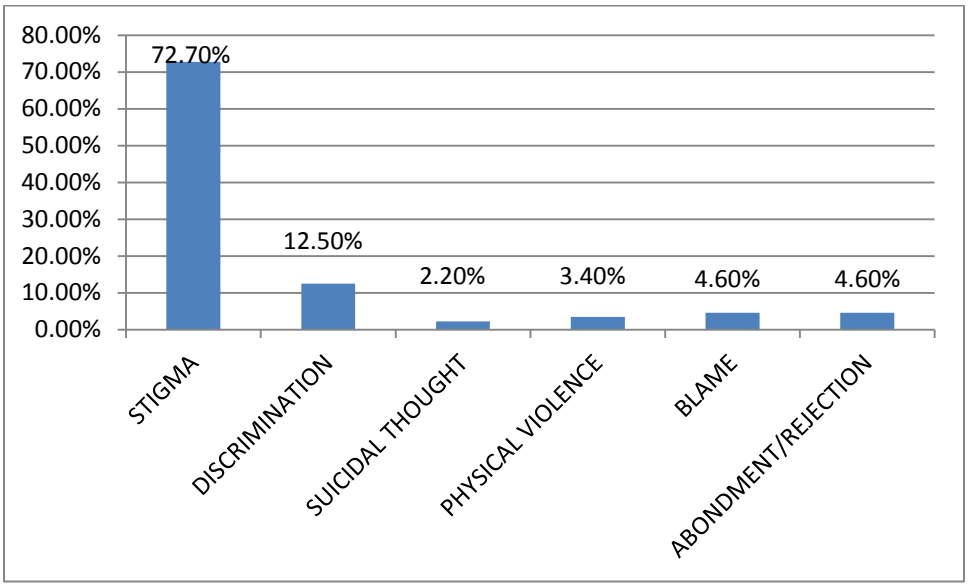

Figure 3: Proportion of disclosure outcome

Table 1: Bivariate analysis on preferred disclosure party

Variable	Category	Disclosed	Undisclosed	Df	Chi square	P – value
Most preferred party	Sexual partner	43	5	4	19.516	0.001
	Friend	53	22			
	Children	69	25			
	Relatives	92	31			
	Parents	85	7			
Reasons for disclosure	Caring	125	12	3	39.814	0.000
	Financial support	82	10			
	Treatment support	65	26			
	Secretive	70	42			
Important disclosure party	Parent	85	32	4	28.042	0.000
	Children	47	20			
	Spouse	102	3			
	Relative	55	18			
	friend	53	17			

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Table 2: Multivariate logistic regression on disclosure determinants

Variable	Category	Disclosed	AOR (95% CI)	P – value
Occupation	Employed	218	2.635(1.639,4.244)	0.000
	Unemployed	124		
Have children	Yes	222	3.195 (1.972, 5.179)	0.000
	No	120		
Lost children / partner	Yes	97	4.217 (2.276, 7.184)	0.000
	No	115		
Knowledge of spouse status	Aware	185	2.035 (1.261, 3.385)	0.003
	Unaware	157		
Assistance of HCP in disclosure	Agree	112	3.983 (2.041, 7.771)	0.000
	Disagree	220		
Disclosure support groups	Agree	295	2.414 (1.386, 4.203)	0.001
	Disagree	47		
Reduce disease transmission	Agree	338	21.125 (6.942, 64.286)	0.000
	Disagree	4		
Alleviate blame	Agree	298	3.220 (1.869, 5.546)	0.000
	Disagree	33		
Stigma	Yes	249	0.154 (0.055, 0.435)	0.000
	No	75		
Number of sexual partners previously	1	139	0.445 (0.262, 0.755)	0.002
	>1	152		
Unfaithfulness in relationship	Yes	172	7.133 (3.712, 13.628)	0.000
	No	21		
Consistent condom use	Yes	253	5.619 (2.659, 11.873)	0.000
	No	17		

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Table 3: Disclosure Benefits

Variable	Category	Disclosed	Undisclosed	Df	Chi square	P – value
Positive disclosure outcomes						
Reduce disease transmission	Agree	338	72	1	52.272	0.000
	Disagree	4	18			
Patient care	Agree	260	68	1	0.009	0.926
	Disagree	82	22			
Alleviate blame	Agree	298	61	1	19.011	0.000
	Disagree	44	29			

Table 4:Bivariate analysis on disclosure side effects

Variable	Category	Disclosed	Undisclosed	Df	Chi square	P – value
Negative disclosure outcomes						
Stigma	Yes	249	86	1	15.955	0.000
	No	75	4			
Violence	Yes	12	15	1	2.403	0.121
	No	26	65			
Abandonment	Yes	15	35	1	2.124	0.145
	No	20	25			
Rejection	Yes	15	59	1	5.276	0.022
	No	30	31			
Discrimination	Yes	43	68	1	1.979	0.160
	No	14	12			
Suicidal thoughts	Yes	8	35	1	0.048	0.827
	No	14	55			

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