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Factors Influencing HIV Voluntary Counseling and Testing (Vct) Among Pregnant Women in Kassala, Eastern Sudan

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Abstract

Aiming to investigate the quantitative acceptance rate and factors affecting HIV_ Voluntary Counseling and Testing (VCT) all pregnant women attended for antenatal care in Kassala hospital, eastern Sudan, during 1st March 2014 – 31st May 2014 were interviewed. Although 962 of 1017 interviewed women agreed to do the test initially only 400 (39.3%) women had done the test. The total women who were not tested (617) reported that ignorance of the effect and knowledge of HIV, stigmatization and inadequate motivation are the main factors lying behind their non-acceptance for HIV testing. There were significant association between rural residence *(CI= 0.4 – 0.7, OR= 0.5, P= 0.000)*, women's education *(CI= 1.0 – 1.4, OR= 1.2, P= 0.006),* husband's education*(CI= 0.2 – 0.5, OR= 0.3, P= 0.000)* and the acceptance of the test. Thus our findings call for urgent effort from stakeholders to collaborate in order to remove obstacles in the acceptance of HIV_VCT. This can be done through awareness and motivation especially in the rural areas. There is also strong need to expand HIV_VCT services in rural areas and urgent consideration of the educational status among the community.

Keywords : HIV ; Counseling ; Pregnancy ; Sudan

Introduction

Human Immune Deficiency Virus (HIV) infectionis a major public health problem and it represents a threat for the people. HIV epidemics is a real challenge in low-income and Sub-Saharan countries and despite the recent efforts, the number of people living with HIV as well as the number of deaths due to AIDS continues to grow in Sub-Saharan countries [1]. The Sudanese Government estimates that HIV prevalence in Sudan is 0.53%, which implies that approximately 99000 people are living with HIV in Sudan [2]. A survey carried out in 2007 in 9164 pregnant women attending antenatal care services in all Sudanese states found an HIV prevalence of 0.2% [3]. The provision of VCT is very important part of any national HIV preventing programme. It is well recognized that peoples living with HIV who are aware of their infection are less likely to transmit HIV to others [4]. Several authors [5,6] have noted that VCT is a key element to identifying HIV infected persons who could benefit from therapeutic interventions. To our knowledge no available data on factors influencing HIV_VCT in eastern Sudan, thus the current study designed and directed to investigate the socio-demographic factors affecting HIV_VCT among pregnant women in Eastern Sudan aiming to provide the policy makers with fundamental data to increase the acceptance rate of the HIV_VCT.

Methods

Kassala, eastern Sudan, is 42282 square kilometer, populated by 1.8 million and it is nearly 600 kilometer from Khartoum, capital of Sudan with a prominent diversity in culture, religion, language and ethnicity. Eastern Sudan is bordered by two African countries having a high prevalence rate of HIV infection [7]. Kassala Hospital provides tertiary care for women who receive antenatal care at the hospital, as well as for referrals from other clinics and hospitals, and for women who live close to the hospital facility. All women with risk factors or obstetric complications are referred to the hospital. However, the referral criteria are not strictly adhered to and many patients without any significant complications deliver at the hospital. In the hospital there is PMCT (Prevention of Mother to Child Transmission) centre providing HIV_VCT free of charge. The service is provided by expired social workers who are trained in the VCT. After informed written consent all pregnant women attended for antenatal care during 1st March 2014 – 31st May 2014were interviewed by professional counselors (social science graduates) to investigate the acceptance rate and factors affecting HIV_VCT. Structured questionnaire was used to gather the factors influencing non acceptance of HIV_VCT and their willingness to undergo HIV testing and it was explained that noncompliance would not influence the clinical management of their pregnancy. These factors included the socio-demographic ones (age, education, religion, ethnicity, residence, husband education…..ect), fear of being positive, ignorance of the effect and knowledge of HIV, stigmatization, religion belief, husband objection, low motivation, crowding and lack of inadequate counselors.Stigmatization refers to prejudice, negative attitudes, abuse and maltreatment directed at people living with HIV and AIDS [8]. Motivation includes internal and external factors that stimulated desire in people to be continually interested and committed to a job, role or subject, or to make an effort to attain a goal [9]. The willingness to undergo HIV testing was further subcategorized into agreement and doing the test, agreement without doing the test and disagreement. Assigned consent was obtained from those who agreed to be tested.HIV statuses were defined as positive or negative. The screening programme was introduced by Sudan National AIDS Programme (SNAP), Ministry of Health in Kassala, and Eastern Sudan since 2007. HIV screening was conducted by qualified and trained staff and initial testing was performed using rapid assay, reactive specimen was retested by Enzyme-Linked Immuno-Sorbent Assay (ELISA) and the results were collected by the counselors who passed them to the patients on the same day of the test.

Data were entered into a computer database and SPSS software

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(SPSS Inc., Chicago, IL, USA, version 16.0) and double checked before analysis. Univariate and multivariate analyses were performed. Acceptance of HIH_VCT was the dependent variable and socio-demographic characteristics were independent variables. Confidence intervals of 95% were calculated and $P<0.05$ was considered significant. In case of discrepancy between the results of univariate and the results of multivariate analyses, the later was taken as final.

The study received ethical clearance from the Health Research Board at Ministry of Health, Kassala, and Eastern Sudan.

Results

During the study period there was 1017 women attended for the antenatal care. All these women offered HIV- VCT and all of them were Muslim. Their age ranged between 15-42 year with mean (SD) 32.2 (6.4) and their mean (SD) parity was 3 (2). The majorities were of less than secondary education (632\1017, 62.1%), and of urban residence (541\1017, 53.2%). Of the total respondents 59.1% (601/1017), 23.5% (239/1017), 9.8% (100/1017) and 7.6% (77/1017) were housewives, employees in different jobs, non skill workers and skill workers respectively. Although 962 of these women agreed to do the test initially only 400 (39.3%) women had done the test and 3 out of the 400 tested women were HIV positive yielding an incidence rate of 0.8%. For the women who initially agreed to do the test but they didn't do it, there was no long time between their initial willingness and their later disagreement (less than one hour). The total women who were not tested (617) reported that ignorance of the effect and knowledge of HIV, stigmatization and inadequate motivation are the main factors lying behind their non-acceptance for HIV testing, Table 1. There were significant association between rural residence*(CI= 0.4 – 0.7, OR= 0.5, P= 0.000)*, women'seducation *(CI= 1.0 – 1.4, OR= 1.2, P= 0.006),* husband's education*(CI= 0.2 – 0.5, OR= 0.3, P= 0.000)*and the acceptance of the test, Table 2.

Discussion

This study showed very poor uptake of HIV_VCT among pregnant women in an area bordering two African countries of high prevalence rate of HIV [7]. Sudanese women had poor uptake of HIV counseling and testing [10], this might be explained by little knowledge of HIV among women thus intensified effort for awareness and education among females will be valuable and might change this result. HIV counseling and testing is one of the most cost-effective HIV\AIDS interventions in Africa that contributes to the prevention of the infection and it is clear that in our setting this intervention is unachievable unless there are parallel efforts to counter act this poor uptake [11]. The results of the current study indicated that ignorance of the effect and knowledge of HIV, stigmatization and inadequate motivation represented the main factors influencing the acceptance of VCT_HIV. Stigma interferes with attempts to fight the HIV and AIDS epidemic as a whole. On a national level, the stigma associated with HIV can deter governments from taking fast, effective action against the epidemic, whilst on a personal level it can make individuals reluctant to access HIV testing, treatment and care. Many researchers concluded that direct offer of the test and positive attitude of the staff have a critical impact of uptake of HIV testing and this might outweigh the individual factors that represents influential barriers against the HIV testing, moreover it is proved that home-based delivery counseling, like what happens in Zambia, significantly increases the uptake and improve the outcome and this is highly recommended in our setting to increase the uptake of HIV_VCT [12]. Inconsistent with our finding Jebessa and Teka in neighboring Ethiopia found significant association between educational status and HIV\VCT [13], more over in our setting recently we reported strong association between education, use of antenatal care, use of family planning and maternal mortality thus it is crucial for the programme managers and key persons to improve the educational level among women [14,15]. In regard to socio-demographic factors our study showed no significant association between theage, parity, occupation, ethnicity and the uptake of HIV_VCT, this may be due to the efforts of governments in creating awareness about HIV/ VCT. On the other hand residence in our study act as main influential factor in acceptance of HIV_VCT and this is attributed to the opportunity available to the women in the urban areas especially access to information and availability of the centers as well. In urban areas there is good access to the information and knowledge about HIV and in Sudan there are 143 voluntary counseling and testing sites, which are located mainly in urban areas [16]. Respondents residing in rural areas had a significantly lower mean in their views on factors affecting acceptance of HIV_VCT, they viewed the factors differently from those in the urban areas.In low-income countries, and the transmission of HIV/AIDS is aggravated by inadequate sexual health education, inadequate voluntary HIV testing and counseling and poor health care system. Counseling assists people to make informed decisions, cope better with life challenges, lead positive lives and prevent further transmission of HIV [17]. The limitation of this study is a hospital based one which underestimates the true uptake and associated factors of HIV_VCT.

Factors	Number	Percentage of the total
Ignorance	127	20.6
Stigmatization	121	19.6
Inadequate motivation	91	14.8
Husband's objection	85	13.8
Religion belief Fear of being positive	78 74	12.6 12
Overcrowding	31	5.0
Crowding \ lack of counselors	10	1.6
Total	**617**	**100**

Table 1: Factors influenced non acceptance of HIV_VCT among pregnant women in Eastern Sudan 2014.

Variable	Univariate analyses			Multivariate analyses		
	OR	95% CI	*P*-value	OR	95% CI	*P*-value
Women's age, years	0.9	0.9-0.9	0.000	0.9	0.9-1.0	0.846
Parity ≥3	0.1	0.9-1.1	0.700	0.9	0.8-1.0	0.625
Women's education < secondary level	0.3	0.2-0.4	0.000	1.2	0.1-1.4	0.006
Women's occupation, housewives	1.0	0.9-1.2	0.205	0.8	0.5-1.3	0.476
Husband's education< secondary level	0.2	0.2-0.2	0.000	0.3	0.2-0.5	0.000
Ethnicity, hadandwa tribe	0.8	0.7-0.8	0.014	1.0	0.8-1.2	0.604
Rural residence	0.3	0.3-0.5	0.000	0.5	0.4-0.7	0.000

Abbreviations: OR, Odds Ratio; CI, confidence interval

Table 2: Socio-demographic factors associated with non acceptance of HIV_VCT among pregnant women in Eastern Sudan using univariate and multivariate analyses, 2014.

Conclusions

In conclusion our findings call for urgent effort fromstakeholders to collaborate in order to remove obstacles in the acceptance of HIV_VCT. This can be done through awareness and motivation especially in the rural areas. There is also strong need to expand HIV_VCT services in rural areas andurgent consideration of the educational status among the community.

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