The factors influencing uptake of Provider Initiated Testing and counselling of HIV in a rural primary health care centre in the Eastern Cape.

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Original Article

Abstract

Background: Access to HIV care begins with the process of undergoing HIV testing. Factors that affect the knowledge, attitude and practices of antenatal attendees towards routine HIV testing could affect its uptake.

Objectives: This study was to determine the factors influencing uptake of routine HIV testing amongst antenatal attendees at Baziya Health Centre, Eastern Cape, South Africa.

Materials & Methods: This was a descriptive study where 96 respondents were interviewed from November 2010 to January 2011. Participants were selected consecutively. A pre-tested, pre-coded, closed interview schedule was used. There were 96 participants in the study.

Results: The mean age of the subjects was 23.8 years ± 15, median of 22 years and a mode of 18 years.The range was 16 - 38 years. The following variables respectively were found as facilitating factors to routine HIV testing patterns: increase in education attainment (AOR 22.7 (1.4-100), p=0.039), influence of group counselling (AOR21 (6-91.5), *p=0.005*), health worker involvement (AOR 11.9 (2-71.4), *p=0.046*). Stigma was found to be a constraining factor to routine HIV testing (AOR27.7 (5-150.3), *p=0.0001*).

Conclusion: The uptake of routine HIV testing amongst pregnant women in Baziya was facilitated by the level of educational attainment, group counselling, and health care workers involvement. Stigma was found to prevent uptake of routine HIV testing. The intervention strategies to maximise routine HIV testing acceptance should focus on education level, group counselling, psychological status and social support. Measures should be implemented to protect against HIV associated stigma.

Key words: Opt-out HIV testing, pregnant women, stigma, VCT.

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Les facteurs influant sur la fréquentation du fournisseur a lancé de conseil et de dépistage du VIH en milieu rural centre de soins de santé primaire dans la province orientale du Cap.

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L'article d'origine

Résumé

Contexte: L'accès aux soins pour le VIH commence avec le processus de subir le test du VIH. Les facteurs qui influent sur les connaissances, attitudes et pratiques des femmes en consultation prénatale à l'égard dépistage systématique du VIH pourraient affecter son absorption.

Objectif: Cette étude visait à déterminer les facteurs qui influencent l'absorption de dépistage systématique du VIH chez les femmes en consultation prénatale au Centre de santé Baziya, Eastern Cape en Afrique du Sud.

Méthodes: Il s'agissait d'une étude descriptive où 96 personnes ont été interrogées de Novembre 2010 à Janvier 2011. Les participants ont été sélectionnés de manière consécutive. Un pré- codé, calendrier des entrevues fermé pré-testé a été utilisé. Il y avait 96 participants à l'étude.

Résultats: L'âge moyen des sujets était de 23,8 ans ± 15 , médiane de 22 ans et un mode de 18 ans.Le gamme était de 16 à 38 ans. Les variables suivantes respectivement ont été retrouvés comme facteurs de facilitation des schémas de dépistage de routine du VIH :augmenter le niveau d'instruction (AOR 22,7 (1,4 à 100), p = 0,039) , l'influence de counseling de groupe (AOR21 (6 à 91,5), *p = 0,005*), la participation des travailleurs de la santé (AOR 11.9 (2 à 71,4), *p = 0,046*). Stigma a été trouvé pour être un facteur contraignant pour dépistage systématique du VIH (AOR27.7 (5 à 150,3), *p = 0,0001*).

Conclusion: Le taux de dépistage de routine du VIH parmi les femmes enceintes dans Baziya a été facilitée par le niveau de scolarité , le counseling de groupe , et les soins participation des travailleurs de la santé. La stigmatisation a été trouvé pour empêcher l'absorption de dépistage systématique du VIH. Les stratégies d'intervention afin de maximiser l'acceptation du dépistage systématique du VIH devraient se concentrer sur le niveau d'éducation, le counseling de groupe , l'état psychologique et le soutien social. Des mesures devraient être mises en œuvre pour protéger contre la stigmatisation associée au VIH.

Mots clés: Opt -out dépistage du VIH, les femmes enceintes, la stigmatisation, le CDV.

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Introduction

The antenatal cohort of patients is susceptible to HIV infection and forms an easy and accessible group for incidence and prevalence studies . The HIV prevalence amongst pregnant women in South Africa is about 29.4%, with the Eastern Cape having a prevalence of 28.1% (2). It is mandatory that all pregnant women should undergo routine Voluntary Counselling and Testing (VCT) as part of their comprehensive management (3). Since the inception of HIV testing, the process had been client initiated in which individuals actively seek to be screened for HIV; this is otherwise called Voluntary Counselling and Testing (VCT) or opt-in HIV testing. Since 2004, WHO has advocated the policy of routine HIV testing in all health care settings, especially in endemic areas (4).

Opt-out screening or routine HIV testing is undertaken after notifying the patient that a rapid HIV test will be performed. The patient may choose to decline or defer testing. Acceptance is inferred unless the patient declines testing .The introduction of routine HIV testing among pregnant women as a screening tool is more effective than risk based testing for detecting unsuspected maternal HIV infection and preventing perinatal transmission .

The World Health Organisation/Joint United Nations Programme on HIV/AIDS (WHO/UNAIDS) policy statement on HIV testing states that routine HIV testing should be promoted in clinical setting, Sexually Transmitted Infections (STI) clinics and areas of high HIV prevalence with access to antiretroviral treatment . The goal of routine testing is to increase the proportion of individuals aware of their status, lessen HIV-related stigma, and provide more people access to life-saving therapy (4, 5). Although concerns are present about routine testing policies being potentially coercive and counselling may no longer be undertaken, this may dissuade people from visiting their doctors for fear of being tested, and it may promote testing-related partner violence (5).

Awareness of HIV status allows access to every aspect of HIV care . In South Africa, the media has been used to increase the awareness of HIV/AIDS and benefit of routine HIV testing. (8, 9). However, the attendance at prevention campaign does not seem to generate reciprocal increase in uptake of VCT . The correlation of the level of educational attainment and uptake of VCT was shown in a study done in the Northern State of Nigeria . This was also demonstrated in other studies .

Several factors have been found to facilitate or act as constraint to uptake of routine HIV testing. These range from educational level, religion, socioeconomic status, age, sex, and fear of stigmatization, counselling method (group or individual) and health care services . Nguyen had shown that the level of educational attainment could impact on HIV testing uptake .

The impact of health care workers in encouraging high risk people to access HIV testing was demonstrated in a study to assess the utilization of VCT services in the Eastern Cape of South Africa, it was found that the proximity and the quality of health services impacted on VCT uptake . A similar study showed that primary health care facilities with effective counselling have an increase uptake of VCT amongst antenatal attendees . The effect of negative emotions experienced by a patient (pregnant women included) testing HIV-positive was seen as a major factor that affect the uptake of routine VCT. In fact, all the health care worker respondents mentioned patients' fear of being the recipients of HIV-related stigma, fear of stigma in the community and stigmatization by other patients as a barrier to acceptance of VCT . Asante also found that stigmatisation could reduce the utilization of routine HIV testing .

This study was to determine the factors influencing uptake of routine HIV testing amongst antenatal attendees at Baziya Health Centre, Eastern Cape of South Africa.

Materials and Methods

This was a descriptive study conducted on antenatal attendees at Baziya Health Centre (BHC) between November 2010 and January 2011. The health facility is about 50 kilometres from Mthatha, Eastern Cape, South Africa. It is part of the teaching complex of the Walter Sisulu University and serves a rural community of

about 50,000 people.

The reference population was all pregnant women aged 15 to 49 years in the Baziya community. The total number of pregnant women that was attending the ANC per year is approximately 1,092. Using the formula: $n= Z^2 (100-p)p/d^2$ the sample size was calculated. Z is usually set at 1.96 (standard normal deviate). The confidence level was specified as 95% and d was 5%. (the tolerable error margin). Several specifications for p were made based on the study objectives. The largest sample size, which satisfied all objectives, was used, and a sample of 73 respondents was needed (p = >95). The sample size was adjusted to compensate for a non- response rate of 20%. Thus, the final minimum sample size was 96.

Participants were selected consecutively. All pregnant women who attended antenatal clinic during the study period were included. A midwife trained in routine HIV testing was responsible for selecting respondents who agreed to participate in the study. All pregnant women who were cognitively impaired were excluded. For patients less than 18 years, accompanying guardian or mother's consent was also sought and obtained.

The data collection tool was a pretested, pre-coded, closed ended structured interview schedule. It was a validated tool adapted from a similar study done in Botswana , to which the researcher had added the demography questions on respondents' demographic characteristics to the tool. The interview schedule was administered by a research assistant; a trained mid-wife on routine HIV testing and the researcher. The 15 to 20 minutes interview was conducted either in English or IsiXhosa in a private setting. A written consent was obtained from all study participants.The interview was conducted on individual respondents in a secured office to ensure confidentiality. It was anonymous-unlinked. Respondents either reported their HIV status or were tested for HIV routinely. Those respondents found to be HIV positive were followed up to access full HIV care and were enrolled into the Prevention of Mother to Child Transmission of HIV (PMTCT) programme in the facility.

Data analysis: The statistical package for the Social Sciences (SPSS) Programme version 18.0 for Windows was used in analysing the data collected. The level of statistical significance was set at $P < 0.05$. Continuous variables were expressed as mean ± standard deviation (SD) and categorical variables as proportions and number of observations. Exploration of the data collected graphically was also undertaken through graphical display.

Logistic regression analysis (multivariate analysis) was performed with uptake of routine HIV testing as dependent variable; while the other variables (age group, educational level, group counselling, health professionals, and stigma) were considered as explanatory variables. Adjusted multivariate odds ratios (OR) for independent determinant for acceptance of routine HIV testing were calculated with corresponding 95% confidence interval (95% CI). The adjustment was necessary to avoid confounding factors.

Approvals for the study were obtained from the ethics and bio-safety committee and the Walter Sisulu University Higher Degree committee. The protocol number is 0013/010.

RESULTS

There were 96 participants in the study. The mean age of the subjects was 23.8 years ± 15, median of 22 years and a mode of 18 years. The range was 16 to 38 years. Table 1 shows that fifty-five (57.3%) of all participants were single.

Table 1: Socio-demography of participants in the study.

Age group in years	Frequency(%)
15-19	31 (32.3)
20-24	26 (27.1)
25-29	18 (18.8)
30-34	13 (13.5)
35-39	8 (8.3)
Educational status:	
None	6 (6.3)
Grade 1 -7	20 (20.8)
Grade 8 -12	70 (72.9)
Tertiary	0 (0.0)
Marital Status	
Single	55 (57.3)
Married	41 (42.7)

n=96

The prevalence of HIV infection amongst the antenatal attendees in the study was 41.7%.
The knowledge about opt-in HIV testing and that about routine (opt-out) HIV testing were reported as 89 (92.7 %) and 82 (85.4 %) respectively. Sixty six (68.8 %) knew of routine HIV testing from health workers. Eight six (89.6%) subjects felt routine HIV testing would make it easier to be tested for HIV. Eighty-six (89.6%) of them knew about HIV testing from health workers. Eighty six (89.6%) had opt-in HIV testing done before the present study while 78 (81.3%) had undertaken an opt-out HIV testing. Ninety five (99%) accepted a new opt-out testing and 95 (99%) intended to recommend opt-out testing to friends, husbands and parents.

After adjusting for confounding variables (age group, religion, marital status educational level, group counselling and health professionals) and using multivariate analysis, educational level, group counselling, health care worker involvement and stigma were identified as factors that could influence routine HIV testing (Table 2).

Table 2: Predictors of uptake of routine HIV testing.

Independent variable	Dependent variable (uptake of routine HIV testing)	
	Adjusted OR (CI 95%)	p - value
Educational attainment	22.7 (1.4 - 100)	0.039
Group counselling	21 (6-91.5)	0.011
Health Care worker Involvement	11.9 (2-71.4)	0.046
Stigma	27.7 (5 - 150.3)	0.0001

The influence of increasing level of educational attainment on uptake of routine HIV testing was significant (AOR 22.7(1.4 -100), p = 0.039) (also highlighted in Fig 1). Another factor seen to have an influence on routine HIV testing was the role of group counselling offered by the health care workers at BHC. The uptake of routine (opt-out) HIV testing was more 90 (93.8 %) (AOR 11.9 (2-71.4) p= 0.011) frequent in participants who attended group counselling. Participants who reported that they have being tested for HIV routinely was more (AOR 29 (6-91.5) p< 0.001), when they underwent group counselling 94(97.9%) than those who had no group counselling 2(2.1%). Stigma was found to influence the uptake of routine HIV testing (AOR 27.7(5 - 150.3). p,0.0001)

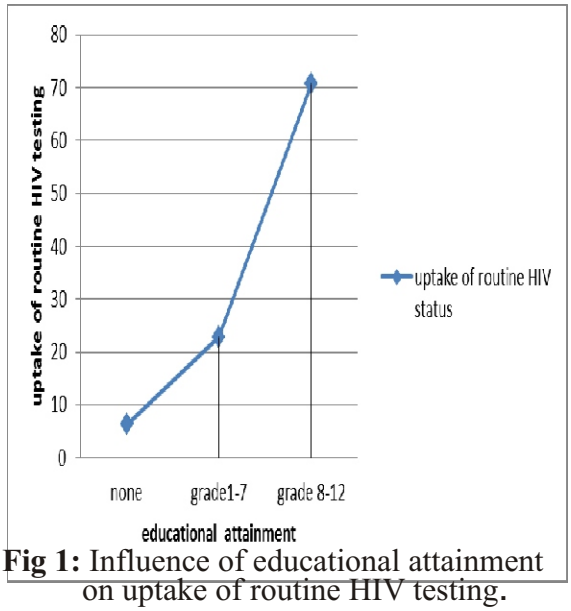

Fig 1: Influence of educational attainment on uptake of routine HIV testing.

Discussion

To the best of our knowledge, this is the first study to assess the factors influencing uptake of routine HIV testing amongst antenatal attendees at Baziya, Mthatha, South Africa. The study highlighted that the majority of pregnant women (85.4%) knew about routine HIV testing, 91.7% were in favour of routine testing and 83.1% would recommend to others to have the testing done. This was similar to the observations of Weiser et al (13). Stigma was a major obstacle to routine HIV testing.
The study also showed that the majority of the women had good knowledge about HIV infection. These findings were consistent with other studies reported from Sub-Saharan Africa . The prevalence of HIV infection among participants was 41.7% which was far higher than the National prevalence of 29.4%, and the

Eastern Cape provincial prevalence of 28.1% (.

The uptake of routine HIV testing was high and compares well with a hospital-based study done in Uganda . The role of health care workers in the uptake of HIV testing was highlighted well in this study. The uptake was increased when patients were counselled. This reinforced the benefit of providing group counselling for patients attending every health centre .

Higher educational attainment, influence of group counselling, health professional involvement were factors facilitating uptake of routine HIV testing which is similar to findings obtained in other studies where the effect of education had a significant impact on knowledge of routine HIV testing . Stigma was identified as the independent determinant of acceptance for testing similar to other findings .

The importance of routine HIV testing was demonstrated in the present study as it allowed the respondents to access HIV care, especially Prevention of Mother to Child Transmission of HIV (PMTCT) .

Limitations of the Study

Relying on a structured interview schedule to determine knowledge, attitude and practices has its limitations. On the other hand, in-depth interviews can shed more light on them. Also a focus group discussion which will allow individual participants time to elaborate on some of their responses in a broader and more subjective context would have enriched the findings of this study. The sample size of the study was small, which could affect validity of the study.

Conclusion

The role of educational attainment, psychological support and health care workers on uptake of routine HIV testing was shown in this study. Stigma remains a constraining factor to acceptance of routine HIV testing. Therefore, intervention strategies directed at minimising stigma within the community such as reinforcing community education about HIV related stigma and encouraging support group participation should be undertaken by health care workers and the community at large. Effort to maximise routine HIV testing acceptance should also focus on encouraging access to education, group counselling and social support.

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References

1. Ghys P, Walker N, Mcfarland W, Miller R,Garnett G. Improved data, methods and tools for the 2007 HIV and AIDS estimates and projections. Sexually Transmitted Infections, 2008; 84: 1.
2. Department of Health. National Antenatal Sentinel HIV and Syphilis Prevalence Survey in South Africa, 2010; 1: 50.
3. Magongo B, Magwaza S, Mathambo V, Makhanya N. National report on the assessment of the public sector's voluntary counseling and testing programme. Health Systems Trust. Durban, South Africa. 2002; 1-20.
4. Bayer R. &Edington C. HIV testing, human rights, and global AIDS policy: exceptionalism and its discontents. Journal of health politics, policy and law, 2009; 34**:** 301-323.
5. Branson BM, Handsfield H H, Lampe M A, Janssen RS, Taylor AW, Lyss SB. et al. National Center for HIV/AIDS & Prevention. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings, US Department of Health and Human Services, Centers for Disease Control and Prevention. 2006; 55: 1-17.
6. Bassett IV, Walensky RP. Integrating HIV screening into routine health care in resource-limited settings. Clinical Infectious Diseases. 2010; 50**:** 77-84.
7. Peltzer K, Matseke G, Mzolo T, Majaja M. Determinants of knowledge of HIV status in South Africa: results from a

population-based HIV survey. BMC public health, 2009; 9**:** 174.
8. Hendriksen E S, Hlubinka D, Chariyalertsak S, Chingono A, Gray G, Mbwambo J. et al. Keep talking about it: HIV/AIDS-related communication and prior HIV testing in Tanzania, Zimbabwe, South Africa, and Thailand. AIDS and Behavior. 2009; 13**:** 1213-1221.
9. Omoera OS, Awosola KR, Okhakhu, MA.Adesina AA. HIV/AIDS and the Broadcast Media in Urban Communities in Edo State, Nigeria. International Journal. 2010; 4: 1-13.
10. Koker P, Lefèvre P, Matthys F, Stuyft P, Delva W. Barriers to VCT despite 13 years of community-based awareness campaigns in a peri-urban township in Northern Limpopo. South African Medical Journal. 2010; 100**:** 364-365.
11. Iliyasu Z, Abubakar I, Kabir M, Aliyu M. Knowledge of HIV/AIDS and attitude towards voluntary counseling and testing among adults. Journal of the National Medical Association. 2006; 98**:**1917-1922.
12. Wanyenze R, Nawavvu C, Namale A, Mayanja B, Bunnell R, Abang B. Et al. Acceptability of routine HIV counselling and testing, and HIV seroprevalence in Ugandan hospitals. Bulletin of the World Health Organization. 2008; 86**:** 302-309.
13. Weiser SD, Heisler M, Leiter K, Percy-De Korte F, Tlou S. Demonner S. et al. Routine HIV testing in Botswana: a population-based study on attitudes, practices, and human rights concerns. PLoS medicine. 2006; 3**:** 261.
14. Abiodun M, Munir'deen A, Aboyeji P. Awareness and knowledge of mother-to-child transmission of HIV among pregnant women. Journal of the National Medical Association. 2007; 99**:** 758.
15. Nguyen H, Gammeltoft T, Rasch V. Early uptake of HIV counseling and testing among pregnant women at different levels of health facilities - experiences from a community-based study in Northern Vietnam. BMC Health Services Research. 2011; 11**:** 29.
16. Hutchinson P, Mahlalela X. Utilization of voluntary counseling and testing services in the Eastern Cape, South Africa. AIDS care, 2006; 18**:** 446-455.
17. Bokhour B, Solomon J, Knapp H, Asch S, Gifford A . Barriers and facilitators to routine HIV testing in VA primary care. Journal of general internal medicine. 2009; 24**:** 1109-1114.
18. Asante A D. Scaling up HIV prevention: why routine or mandatory testing is not feasible for sub-Saharan Africa. Bulletin of the World Health Organization. 2007; 85**:** 644-646.