Sexual and Reproductive Health Needs of HIV Positive Women in Botswana - A Study of Health Care Worker's Views

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Figure 1. Definition of sexual and reproductive health from the International Conference on Population and Development, Cairo, 5-13 September 1994 (UN, 1995)

"Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. In line with the above definition of reproductive health, reproductive health care is defined as the constellation of methods, techniques and services that contribute to reproductive health and well being by preventing and solving reproductive health problems. It also includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and sexually transmitted diseases."

Table 1. Age, education level, years of experience and HIV training of respondents, *n* = 98

Category	*n*[a]	Age in years, median (IQR)	Holds a diploma, certificate or higher, number (percent)	Number of years in health care sector, median (IQR)	Have received specific HIV training*, number (percent)
Doctor	1	30	(MD)	6	yes
Nurse/Midwife	42	38 (33-44.75)	38 (91%)	10 (5.5-22)	38 (93%)
Pharmacist/Pharm Technician	3	35 (26-43)	3 (100%)	12 (3-21)	3 (100%)
Health Educator	26	42 (38-53)	0 (0%)	14 (8.75-26.25)	17 (74%)
Counselor	19	29 (26.75-34)	11 (61%	5 (3-7)	18 (95%)
Assistant Nurse	7	28 (22-33)	7 (100%)	4 (1-4)	3 (43%)

[a] Due to missing data, the actual *n* changes for each variable within a category but only by a maximum of <2
*Specific training may include short courses on PMTCT, Isoniazid Preventive Therapy (IPT), TB and HIV/AIDS, family care model and/or KITSO training programs. Fifty-one percent of participants mentioned training through the KITSO national HIV/AIDS training program. However, those that did not mention KITSO by name may also have taken part in a KITSO training program.

Table 2. Respondent's responses to SRH knowledge questions pertaining to pregnancy outcomes, family planning and partner violence.

Item	(n)	True # (%)	False # (%)	don't know # (%)
HIV infection may be associated with increased risk of miscarriage.	96	56 (58)	29 (30)	11 (12)
HIV infection may be associated with increased risk of preterm delivery.	94	49 (52)	26 (28)	19 (20)
HIV infection may be associated with increased risk of low birth weight.	94	58 (62)	25 (26)	11 (12)
Research has shown that HIV status significantly alters fertility desires.	90	31 (35)	29 (32)	30 (33)
Several antiretroviral drugs have the potential to either decrease or increase the bioavailability of steroid hormones in hormonal contraceptives?	82	44 (54)	12 (14)	26 (32)
Violence inflected by an intimate partner and being infected with HIV are strongly associated?	87	40 (46)	24 (28)	23 (26)

Table 3. Attitudes about SRH and HIV among respondents

Item	*n*	Strongly disagree (1) # (%)	Disagree (2) # (%)	Agree (3) # (%)	Strongly agree (4) # (%)	Item median (IQR)
The current health system in place has sufficient resources for providing special counseling to HIV-positive women who would like to become pregnant.	94	5 (5.3)	23 (24.5)	33 (35.1)	33 (35.1)	3.00 (2-4)
I believe that it is important that sexual and reproductive health services are integrated into the services offered at each IDCC.	96	2 (2.1)	9 (9.4)	31 (32.3)	54 (56.3)	4.00 (3-4)
Health services provide an entry point for identifying and responding to women who experience sexual violence.	86	5 (5.8)	21 (24.4)	44 (51.2)	16 (18.6)	3.00 (2-3)
Antiretroviral therapy programs need to be sensitive to women-specific needs, for example reproductive health.	87	3 (3.4)	14 (16.1)	28 (32.2)	42 (48.3)	3.00 (3-4)
Family planning services provide an avenue to help prevent the spread of HIV.	89	15 (16.9)	21 (23.6)	25 (28.1)	28 (31.5)	3.00 (2-4)
Women living with HIV/AIDS are promiscuous.	78	41 (52.6)	25 (32.1)	9 (11.5)	3 (3.8)	1.00 (1-2)
It is irresponsible for a woman with HIV/AIDS to want to have children.	96	27 (28.1)	46 (47.9)	11 (11.5)	12 (12.5)	2.00 (1-2)
I believe an HIV positive woman has the right to have a child if she desires.	96	7 (7.3)	12 (12.5)	52 (54.2)	25 (26)	3.00 (3-4)
I believe it is a woman's right to terminate an unwanted pregnancy.	93	29 (31.2)	26 (28.0)	23 (24.7)	15 (16.1)	2.00 (1-3)
Childbearing plays a central role in the social identity of women	89	3 (3.4)	8 (9.0)	55 (61.8)	23 (25.8)	3.00 (3-4)
I have the necessary skills to counsel an HIV-positive woman about her sexual problems.	93	3 (3.2)	15 (16.1)	51 (54.8)	24 (25.8)	3.00 (3-4)
I have the necessary skills to counsel an HIV-positive woman about her desire to have children.	94	4 (4.3)	18 (19.1)	49 (52.1)	23 (24.5)	3.00 (3-3.25)
I feel comfortable asking an HIV-positive woman about her sexual behavior.	95	3 (3.2)	11 (11.6)	41 (43.2)	40 (42.1)	3.00 (3-4)

Table 4. Care Practices Case Study: A twenty-nine year old HIV positive woman presents herself at the clinic and tells you she is pregnant. From your previous knowledge, you know that she has two children, and that she is not married or in a stable relationship. During your consultation you notice some questionable marks and bruises on her arms and face. She pleads with you to help her keep the baby.

Respondents reported case strategy	**(n)**	**Yes # (%)**	**No # (%)**
Ask the client if she is currently taking ARV's.	95	83 (87)	12 (13)
Express disapproval or disappointment towards the woman for becoming pregnant when she knows she is HIV positive.	94	26 (28)	68 (72)
Offer counseling regarding ante-natal care.	94	93 (99)	1 (1)
Offer support and indicate she needs to discuss the pregnancy with her doctor about her current medications.	94	90 (96)	4 (4)
Refer her for STI screening.	92	72 (78)	20 (22)
Ask if she has disclosed her status to her partner.	94	93 (99)	1 (1)
Offer support and counseling for her to disclose her status.	91	83 (91)	8 (9)
Ask her to bring her partner to the clinic for counseling and testing.	93	92 (99)	1 (1)
Ask her how she obtained her questionable marks and bruises.	92	87 (95)	5 (5)
If you find she has been a victim of violence, you encourage her to notify the necessary authorities.	89	85 (95.5)	4 (4.5)

Sexual and Reproductive Health Needs of HIV Positive Women in Botswana - A Study of Health Care Worker's Views

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Botswana's HIV prevalence is one of the highest in the world at 31.8% in the 15-49 years antenatal population. Being HIV positive for a woman presents unique challenges with regard to sexuality, child bearing and partner relations. To ensure optimal sexual and reproductive health (SRH) of HIV positive women, it is important to understand how health care workers (HCWs) are prepared to address SRH issues such as contraception, fertility desires and partner violence. This study reports on a knowledge, attitudes and practices (KAP) questionnaire completed by 98 HCWs from clinics located in and nearby Gaborone and analyzed using descriptive and non-parametric statistics. The majority of participants were nurses (43%), health educators (27%) and lay counselors (19%), 82% female, median age of 35 (IQR:29.25-43.75). General HIV/AIDS knowledge was high with a median score of 8.0/9(89%) (IQR:8-9). However, the median SRH knowledge score was much lower at 6.0/10(60%) (IQR:4-7). Of the three groups, the SRH knowledge scores of lay counselors were significantly lower than nurses (p=.024). The attitude scores pertaining to issues such as family planning, sexual violence, the health system's ability to offer SRH services, and personal ability to offer SRH services were moderately positive with a median score of 75% (IQR:69%-81%); although nearly 25% of respondents felt that it is irresponsible for an HIV positive woman to want to have a child. When presented with a case study of an abused, HIV positive pregnant woman, most respondents indicated they would offer supportive care without judgment; however 26% of respondents indicated they would express disapproval or disappointment for becoming pregnant when she knows she is HIV positive The low SRH knowledge scores together with discriminatory attitudes and practices emphasize the need for increased and ongoing training in SRH issues for all HCWs who provide care for HIV positive women.

Key Words: HIV-Positive Women; Sexual and Reproductive Health; Knowledge, Attitudes and Practices; Health Care Workers; Family Planning

Introduction

Sexual and reproductive health (SRH) and SRH care services (as defined in Figure 1) have been identified as fundamental to reach not only Millennium Development Goals (MDGs) related to SRH, but also MDGs pertaining to poverty reduction, educational opportunities and gender equality (WHO, 2004).

[INSERT FIGURE 1 HERE]

In Botswana, where HIV prevalence is above 30% in the ante-natal population (MOH, 2009), unplanned and repeat pregnancies have been noted as an issue of concern within prevention programs (NACA, 2008, 2010). The 2009 Sentinel Surveillance indicated 30% of HIV positive pregnant women who participated in the study were on HAART prior to pregnancy. A 2003 survey of 504 prenatal and postpartum women in Francistown showed 62% of all pregnancies among the HIV positive and negative participants were unplanned and 16% were unwanted (Creek, 2009).

Unplanned pregnancies among HIV positive women present several SRH challenges, including increased risk of maternal mortality (McIntyre, 2005), as well as ART-related pregnancy complications leading to poor infant health (Parekh, 2011; Weinberg, 2011). Pregnancy alone indicates unprotected sex which can drive HIV transmission, re-infection and the spread of drug-resistant strains of HIV. Given these potential adverse outcomes, HIV positive women must have access to comprehensive SRH care services, delivered by HCWs who hold sufficient SRH knowledge and non-discriminatory attitudes.

Few studies have looked at the knowledge, attitudes and practices (KAP) of HCWs with respect to the SRH needs of HIV positive women. A study by Hayford and Agadjanian (2010) reported nurses in Mozambique held pessimistic attitudes towards HIV positive women with respect to adherence to contraceptives, and initially advised HIV positive women to cease having

children all together. A study in Zambia (Banda, 2004) found many HCWs were not providing counseling on dual protection methods as outlined in national policy and that HIV positive women were frustrated with HCWs unable to inform them about suitable contraceptives to avoid pregnancy. These studies reveal the important role HCWs play in the SRH of HIV positive women, and therefore reiterate the importance of adequate knowledge among HCWs in order to offer comprehensive SRH care in an appropriate, timely, convenient manner without judgment. This study was conducted to assess the KAP of HCWs with regard to providing SRH services to HIV positive women in Botswana in order to inform SRH and HIV training curricula, policies, strategies and programs.

Methodology

The study was conducted at all ANC (18) and ART (6) clinics in Gaborone and nearby peri-urban villages, Mochudi and Mogoditshane between April-September, 2009. All HCWs at the 24 study sites were given a letter introducing the study and inviting him/her to participate by completing and returning the KAP questionnaire in a sealed envelope. Human subjects' study approval was obtained from the Botswana Health Research and Development Unit, the Harvard School of Public Health Human Subjects Committee, and the Biomedical Research Ethics Committee of the University of Kwazulu Natal. Responses were voluntary and anonymous. Return of the survey implied consent to participate. Participants did not receive any compensation.

KAP Questionnaire

The self-administered, semi-structured questionnaire consisted of four sections: 1) general HIV/AIDS knowledge; 2) SRH and HIV knowledge; 3) Attitudes about SRH and HIV

services; 4) SRH and HIV care practices. Questions for the knowledge sections focused on issues such as HIV transmission, family planning, pregnancy outcomes and partner violence among HIV positive women (EngenderHealth, 2006). Knowledge responses were recorded as True/False/Don't Know, where correct responses scored one point each. Knowledge scores were calculated by dividing the number of points (correct responses) by the total possible points (total questions per section).

Responses for attitudes were measured on a 4-point Likert scale ranging from (1) strongly disagree to (4) strongly agree, where a higher score indicated a more positive attitude (after recoding where necessary). The total attitude score for each HCW was calculated by adding up the values for the questions he/she answered, divided by the maximum possible points for those questions. Given internal consistency of the attitude scale (Cronbach alpha .603), both the attitude scale scores and individual item measures are presented.

Care practices were investigated by presenting a "case study" of an HIV positive woman in need of SRH services, and asking HCWs about their intended practices in relation to the case. Ten statements were listed and respondents indicated "yes" or "no" depending on the approach that they would take. A practice score (maximum 10) was created by giving one point for each most appropriate response.

Data analysis

The results were analyzed using SPSS 17 (SPSS, 2008). Frequency tables were created to describe the knowledge, attitudes and practices of the health care workers. Spearman's correlation, Mann Whitney U and Kruskal-Wallis Test were used to compare KAP scores with continuous and categorical variables.

Results

A total of 105 out of 148 distributed questionnaires were returned in sealed envelopes for a response rate of 71%. Ninety-eight surveys (93%) were considered for the data analysis - only surveys from HCWs who actively engaged with patients were used. Of the 98 respondents, 80 (82%) were female with median age of 35 (SD ± 9.39; range 20-59). The majority of respondents were nurses (n=42, 43%), health educators (n=26, 27%) and lay counselors (n=19, 19%). Over half of respondents held a diploma or certificate; many had worked in healthcare for over 10 years and the majority received specific training in HIV/AIDS (See Table 1).

[INSERT TABLE 1 HERE]

Knowledge Scores: Nearly all HCWs were knowledgeable about general HIV information, despite 13% believing HIV could be cured. The respondents' median HIV knowledge score was 8.0 (IQR: 8-9) or 89%. However, the overall median SRH knowledge score was 6.0 (IQR:4-7) or 60%. Scores were lowest for questions pertaining to pregnancy outcomes, family planning and partner violence (See Table 2). SRH knowledge scores differed between nurses, health educators and lay counselors [x^2(K-W) = 4.655, p=.054], with nurses having significantly higher SRH scores compared to the lay counselors [z (60) = -2.264; p = .024] (Mann-Whitney U Test used for ad-hoc analysis).

[INSERT TABLE 2 HERE]

Attitude Scores: The median attitudes score was 75.0% (IQR:69%-81%). Attitude scores were significantly different by age group [x^2(K-W) = 14.210; p = .027], as well as number of years in the health care sector (*rho* = .204; p = .046). Those who were older and more experienced had

higher scores. HCWs with specific HIV/AIDS training had scores higher than HCWs without similar training [z (93) = -3.09; p = .002]. There was a significant positive correlation between SRH knowledge scores and attitude scores (*rho* = .292; p = .004), indicating the higher the SRH knowledge scores, the higher the attitude scores. In addition to overall attitude scores, we also looked at each of the items individually (See Table 3).

[INSERT TABLE 3 HERE]

Care Practices: Most respondents indicated they would offer supportive SRH services without judgment, despite 28% indicating they would express disapproval/disappointment towards the woman for becoming pregnant when she knows she is HIV positive (See Table 4). Practice scores were higher among diploma holders compared to those completing secondary school [z (89) = -2.366; p = .018]. In line with these results, scores were higher among nurses compared to health educators [z (66) = -3.626; p = <.005].

[INSERT TABLE 4 HERE]

Discussion

The findings from this study reveal the potential for HIV positive women in Botswana to experience lack of information, misinformation and possible discrimination when seeking SRH services at ANC and ART clinics. While overall, the KAP of respondents are adequate and positive, many still lack facts about contraception, pregnancy risks, and the association between HIV and partner violence among other areas, as well as hold attitudes which can alienate HIV positive women from seeking SRH services. Similar findings have been seen in Lesotho (Warren, 2008) and Uganda (Farrell, 2007) where HCWs were found to lacked general skills in discussing family planning among other SRH issues with HIV positive women.

The findings also point towards the need to intensify training among lay counselors and health educators, whose SRH knowledge scores and practice scores were significantly lower than nurses. Given that nurses are overstretched and often unable to spend significant time with each patient, it is vital that the lay counselors and health educators are fully trained to discuss all SRH issues with HIV positive women.

With strengthened SRH services in ANC and ART clinics, unplanned and unwanted pregnancies could be prevented which would not only assist Botswana reach Millennium Development Goals of reduced maternal and infant mortality, but would also reduce overall costs to the PMTCT program while providing much needed support for the reproductive choices of HIV positive women.

Study limitations include a small sample size and mainly urban study sites.

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