HIV/AIDS Behavioural Surveillance Survey (BSS)

Osire refugee camp and surrounding communities
Namibia

December 2008

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EXECUTIVE SUMMARY

Osire refugee camp is located in Central Namibia, in the Otjozondjupa region, Otjiwarongo district. During December 2008, the first HIV behavioural surveillance survey was conducted in the camp and surroundings. The questionnaire used in the survey was adapted from the "UNHCR Manual for Conducting HIV Behavioural Surveillance Surveys among displaced populations and their surrounding communities" and translated into the four most common languages spoken by the refugees and local community: English, French, Afrikaans and Portuguese. Native speakers conducted the interviews, so that there was not need of interpreters. Thirty clusters were identified in the camp and assigned to the fifteen blocks using the probability proportional to size method. Survey teams attempted to conduct interviews with household members 15 – 49 years of age in five households in each cluster; the team completed 245 interviews with refugees. The refugee camp is surrounded by commercial farms; 16 farms were visited to interview at least five nationals in each farm, ensuring that interviews were completed with both men and women and including at least one interview with a person 15 – 24 years of age. The team completed 96 interviews with nationals.

Characteristics of the respondents
A larger proportion of the sampled respondents in the refugee population (36.5%), compared to nationals (28.1%), were in the youngest age group (15-19 years). The proportion of respondents who were currently married at the time of the survey was low in the refugee respondent population (35.1%) and unusually low (8.3%) in the sample of nationals interviewed. Most refugees (73.9%) identified themselves as Protestant. Surrounding nationals were more evenly distributed between the Protestant (46.9%) and Catholic (41.7%) groups. Similar proportions of male and female refugees had completed primary school (39.8% vs. 42.2%) and a greater proportion of farm community respondents who had any education indicated that they had completed secondary school (46.9%), compared to refugee respondents (39.6%).

Circumcision
Circumcision among male refugees (85.4%) appears to be more common than among males in the surrounding communities (55.6%), although statistical comparison is not possible.

Displacement and mobility
The majority of refugee respondents indicated that they had been living in the camp for over five years, compared to 43.7% of nationals. Almost 65% of respondents in the surrounding communities had experienced a prolonged absence during the last 12 months, compared with 32.6% of refugees. Within the sample of nationals, the most commonly reported reason for prolonged absence was family-related (40%). For refugees, the main reason was holidays (22%). Almost 21% of refugees and 29% of nationals reported visiting the surrounding community one or more times per month.

Alcohol and drug use
Reported alcohol and drug use was extremely low among refugee respondents, among whom 90.1% never had any drink containing alcohol. 23.6% of nationals indicated that they had taken drinks containing alcohol at least once a month in the past four weeks. Reported drug use in both populations is minimal.

Sexual behaviour
The reported median age at first sex in this sample was slightly lower among refugees (17 years) compared to nationals (18 years). It appears that a fairly large proportion of never-married young people aged 15-24 in both populations may be sexually active (67.4% of nationals and 50.4% of refugees). The median age at marriage for nationals (27 years) appears to be higher than for refugees (21 years). Because of the small numbers of respondents, both refugees and nationals, who reported casual and transactional sex in the past 12 months, it is difficult to ascertain realistic estimates for condom use within groups who experience these types of sexual partnerships.

Forced sex
The proportion of women who indicated having had this experience in the past 12 months was 3.5% for refugees and 4.1% for nationals. No male nationals said they had experienced forced sex within the past 12 months and 8.3% of male refugees in the 15-24 year age group reported this experience.

Condom knowledge and use
The majority of both refugees (89.4%) and nationals (95.8%) said that they had ever heard of condoms. Among respondents who had ever heard of condoms, more respondents in surrounding communities (67%) than refugees (36%) had ever used a condom. Among those respondents who had ever used a condom, 89.8% of refugees and 98.4% of nationals said they knew where to get a condom and overwhelmingly, both populations identified the health facility as the primary place where they seek condoms.

Sexually transmitted infections
Most refugees (88.2%) and respondents from surrounding communities (91.7%) said that they had ever heard about diseases that can be transmitted through sexual intercourse. Of the few individuals with STI symptoms within the past 12 months who sought treatment, all received treatment at a public health center.

Knowledge, opinion and attitudes towards HIV/AIDS
38.4% of refugees and 32.2% of respondents in the surrounding communities had a comprehensive correct knowledge of HIV/AIDS. Among refugee respondents, 30.6% were found to have accepting attitudes towards persons living with HIV. A smaller proportion of respondents living within the surrounding communities (18.7%) had accepting attitudes, though it is not possible to determine whether or not this difference is statistically significant.

Exposure and access to information about HIV/AIDS
Among refugees who had heard of HIV/AIDS, 81% of males and 86.1% of females had received information on HIV/AIDS in the past 12 months; 70.2% of males and 79.6% of females from surrounding communities had received this type of information. Among respondents who had ever heard of HIV, roughly similar proportions of refugees (58.4%) and nationals (53.1%) had ever been tested for HIV. In both populations, a greater proportion of females compared to males (refugees: 74.4% females and 35.4% males; nationals: 69.4% females and 36.2% males) had ever been tested for HIV, though it is not possible to determine whether or not these differences are statistically significant. Pre-test counseling and reception of results was almost universal across all gender and age groups in both communities. Antenatal care coverage was quite high in both populations

II. BACKGROUND

Osire refugee camp is located in Central Namibia, in the Otjozondjupa region, Otjiwarongo district, some 240 km far from the capital city Windhoek. Since 1999, UNHCR and the Government of Namibia are providing assistance and protection to the refugees. By the end of 2008, Osire refugee camp was hosting 6,733 refugees; the majority of them (73%) come from Angola, and the rest are mainly from the Great Lakes Region (Democratic Republic of Congo, Burundi and Rwanda). The organized voluntary repatriation program to Angola was officially concluded in March 2007.

The Ministry of Health and Social Services [MoHSS) supports in the provision of health care and referral services, medications, human resources, training and overall management on the health sector. Osire Health Centre serves the general Namibian population including farm workers on surrounding farms (approximately 10% of the patients using the health facilities are from outside Osire settlement) and services provided are of the same standard as in any other health facility at this level in Namibia. The Ministry of Education is in charge of the school at the camp, that also caters for national children. The Ministry of Home Affairs and Immigration (MHAI) is involved in the facilitation of the technical aspects of the camp administration. African Humanitarian Action (AHA) supports the health sector, food distribution, community services and. World Food Program supports the general food ration and the supplementary feeding program in the camp. Over 40% of all households own small kitchen gardens on which they group local vegetables for sale and own consumption.

A comprehensive package of HIV prevention, treatment, care and support services is available in the camp. By the end of September 2008, 108 clients had tested HIV positive in the VCT centre at Osire (82% of them were refugees, and 70% women), and forty five refugees are currently receiving antiretrovirals at the health centre. Many task forces are involved in the HIV response in Osire.

III. OBJECTIVES

The behavioural surveillance survey was designed to help UNHCR and its partner agencies improve HIV prevention programming in Osire. The survey aimed to obtain information about the following:

- HIV transmission patterns and vulnerability
- Sexual behaviour
- Access to and use of HIV preventive services

IV. METHODS

Survey sample size calculations were based on the following considerations:

- Size should be adequate to allow estimation of the current proportion of residents aged 15 – 49 years knowledgeable about HIV/AIDS (proportion assumed to be 50% for the calculation as it generates the largest target sample size if the other values, given below, do not vary)
- Confidence level: 95%
- Level of precision: 10%
- Design effect: 2

Thirty clusters were identified in the camp and assigned to the fifteen blocks using the probability proportional to size method. Survey teams attempted to conduct interviews with household members 15 – 49 years of age in five households in each cluster. Teams used existing overview maps of the camp to locate the blocks and then drew detailed maps that identified houses and landmarks. They divided each block into approximately equal segments (each with ten to twenty houses) and randomly identified the segments that served as sample clusters in the block. For example, if three clusters were assigned to a block and the block had five segments, team members wrote the segment numbers on slips of paper and drew three of the five slips. They carried out a similar process to identify five households for interviews.

The target sample was 192. However, interviewers did not aim to complete a quota of 6 or 7 interviews per cluster. Instead they tried to interview all household members 15 - 49 years of age in the five households. Survey teams completed 245 interviews in the camp.

The refugee camp is surrounded by commercial farms in a very low densely populated area. A survey team visited 16 farms to interview nationals. They attempted to purposively select five workers on each farm, ensuring as far as possible that interviews were completed with both men and women and including at least one interview with a person 15 – 24 years of age. The team completed 96 interviews with nationals.

The questionnaire used in the survey has been adapted from the UNHCR Manual for Conducting HIV Behavioural Surveillance Surveys among displaced populations and their surrounding communities. The questionnaire was translated into the four most common languages spoken by the refugees and local community: English, French, Afrikaans and Portuguese. Native speakers conducted the interviews, so that there was not need of interpreters. Fifty persons, refugees and nationals, were selected to participate as surveyors. There was a balance on gender, age and nationalities. All of them were trained during three days on the objectives and methods of the survey, and six of them were appointed as supervisors.

Ten persons were trained on data entry into the computer, and double entry was done. Data was analyzed with SPSS software.

Table 1. Core Indicators

	Refugee Settlement									Surrounding Farms					
	Male %			Female %			Total %			Male %		Female %		Total %	
Indicator	**n**	**LCI**	**UCI**	**n**	**LCI**	**UCI**	**n**	**LCI**	**UCI**	**n**	**%**	**n**	**%**	**n**	**%**
Sexual behavior															
1. Young men and women aged 15-24 who have had sexual intercourse before age 15	7	**11.9**		4	**5.8**		11	**8.6**		2	**9.1**	3	**13.6**	5	**11.4**
		5.4	24.2		2.4	13.4		4.6	15.6						
2. Never-married young people aged 15-24 who have never had sex	35	**59.3**		24	**40.0**		59	**49.6**		10	**47.6**	4	**18.2**	14	**32.6**
		44.9	72.2		27.3	54.3		38.2	60.9						
3. Never-married young people aged 15-24 who abstained from sexual intercourse in the past 12 months	35	**89.7**		24	**100**		59	**93.6**		10	**90.9**	4	**100**	14	**93.3**
		75.4	96.1		---	---		83.7	97.7						
4. More than one sex partner in the past 12 months among men and women aged 15-49	11	**10.7**		5	**3.5**		16	**6.5**		3	**6.38**	2	**4.1**	5	**5.2**
		6.4	17.3		1.3	9.0		4.0	10.4						
5. Sex with a non-regular partner in the last 12 months among men and women aged 15-49	6	**5.8**		6	**4.2**		12	**4.9**		3	**6.38**	3	**6.12**	6	**6.25**
		2.7	12.1		1.3	12.4		2.6	9.2						
6. Condom use at last sex with a non-regular partner among men and women aged 15-49	4	**66.7**		1	**16.7**		5	**41.7**		3	**100**	1	**33.3**	4	**66.7**
		20.2	94.0		1.13	77.8		12.3	78.4						
7. Sex with a transactional partner in the past 12 months among men and women aged 15-49	4	**3.9**		1	**.70**		5	**2.0**		1	**2.1**	0	**0**	1	**1.0**
		1.2	12.2		.09	5.3		.72	5.6						
8. Condom use at last sex with a transactional partner among men and women aged 15-49	2	**50.0**		0	**0**		2	**40.0**		1	**100**	0	**0**	1	**100**
		6.9	98.1		---	---		4.7	90.0						
HIV testing															
9. Had HIV test in the past 12 months and received results among men and women aged 15-49	24	**23.3**		70	**49.3**		94	**38.3**		12	**25.5**	17	**34.7**	29	**30.2**
		17.7	29.9		40.8	57.8		32.3	44.9						
STI health facility utilization															
10. Had STI symptom in past 12 months and sought treatment at health facility among men and women aged 15-49	4	**57.1**		1	**14.2**		14	**35.7**		1	**50.0**	1	**33.3**	2	**40.0**
		18.2	88.8		1.1	71.9		10.7	72						

HIV/AIDS knowledge, attitudes and misconceptions																
11. Comprehensive correct knowledge of HIV/AIDS among men and women aged 15-49	46	**44.7**	35.4 54.2	48	**33.8**	24.4 44.6	94	**38.4**	30.7 46.6	13	**27.7**	18	**36.7**	31	**32.3**
12. Accepting attitudes towards PLWH/A among men and women aged 15-49	26	**25.2**	17.7 34.6	49	**34.5**	23.4 47.6	75	**30.6**	23.5 38.7	12	**25.5**	6	**12.2**	18	**18.7**
13. Percent of men and women aged 15-49 who have been reached by HIV prevention programs	27	**26.2**	20.1 33.3	32	**22.5**	14.0 34.1	59	**24.1**	18.3 30.9	35	**75.5**	31	**63.3**	66	**68.7**
Displacement situations																
14. Percent of women aged 15-49 who were forced to have sex in the past 12 months	--	---	--- ---	5	**3.5**	1.3 9.4	---	---	--- ---	---	---	2	**4.1**	---	---
15. Percent of men and women aged 15-49 who resided in current community for less than 12 months	6	**5.8**	2.3 14.1	6	**4.2**	1.9 9.0	12	**4.9**	2.3 10.1	13	**27.7**	12	**24.5**	25	**26.0**
16. Percent of men and women aged 15-24 who were away from home for one continuous month or more	20	**33.9**	22.4 47.6	23	**33.3**	22.7 46.0	43	**33.6**	25.6 42.7	16	**72.7**	19	**83.4**	35	**79.5**
17. Percent of men and women aged 25-49 who were away from home for one continuous month or more	16	**36.7**	22.3 53.2	21	**29.2**	19.1 41.7	37	**31.9**	24.8 39.9	8	**32**	19	**70.4**	27	**51.9**
18. Percent of men and women aged 15-49 who visit the surrounding community one or more times per month	26	**25.2**	16.2 37.1	25	**17.6**	11.4 26.1	51	**20.8**	14.7 28.7	18	**38.3**	10	**20.4**	28	**29.2**

V. RESULTS

a) Characteristics of respondents

Overall, a larger proportion of the sampled respondents in the refugee population (36.5%), compared to nationals (28.1%), were in the youngest age group (15-19 years), while more nationals (54.2%) compared to refugees (47.5%) were in the adult population (25-49 years). Within the refugee population, a greater proportion of males were in the younger age groups compared to females. Likewise there were more females (51.1%) than males (42.7%) in the adult population (25-49 years).

All respondents in the surrounding farm communities were Namibian, and most refugees were Angolan (69.8%) with a smaller but significant proportion being Congolese from the Democratic Republic of Congo (DRC). More of the female refugees were Angolan (73.9%) compared to Congolese (19%) while among males refugees a somewhat lower percentage were Angolan (64.1%) compared to Congolese (23.3%). The vast majority of respondents living in the refugee camp were registered as refugees (92.6%) although nearly 7% were not.

The proportion of respondents who were currently married at the time of the survey was low in the refugee respondent population (35.1%) and unusually low (8.3%) in the sample of nationals interviewed. Most refugees (73.9%) identified themselves as Protestant with slightly more males (24.3%) than females (19%) indicating that they were Catholic. Surrounding nationals were more evenly distributed between the Protestant (46.9%) and Catholic (41.7%) groups.

Although a small percentage of refugee respondents reported that they had not attended school (6.1%) or attended only some level of primary school (8.2%) compared to respondents in the surrounding farm communities (22.9% and 16.7%, respectively), a greater proportion of farm community respondents who had any education indicated that they had completed secondary school (46.9%), compared to refugee respondents (39.6%). Interestingly, more female respondents in the surrounding communities had completed primary and secondary levels of education compared to their male counterparts (14.3% and 51%, vs. 8.5% and 42.5%). Similar proportions of male and female refugees had completed primary school (39.8% vs. 42.2%), while more males than females had completed secondary school (46.6% vs. 34.5%).

Table 2. Demographic Characteristics of respondents

Characteristics	**Osire refugees (N = 245)**			**Surrounding nationals (N = 96)**		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Age **Total**	**N = 103**	**N = 141**	**N = 244**	**N = 47**	**N = 49**	**N = 96**
15-19	39.8	34.0	36.5	29.8	26.5	28.1
20-24	17.5	14.9	16.0	17.0	18.4	17.7
25-49	42.7	51.1	47.5	53.2	55.1	54.2
Nationality **Total**	**N = 103**	**N = 142**	**N = 245**	**N = 47**	**N = 49**	**N = 96**
Namibian	1.9	1.4	1.6	100.0	100.0	100.0
Angolan	64.1	73.9	69.8	---	---	---
Congolese (DRC)	23.3	19.0	20.8	---	---	---
Congolese (Brazzaville)	1.0	0	.04	---	---	---
Rwandan	2.9	2.1	2.4	---	---	---

Burundian	2.9	1.4	2.0	---	---	---
Sudanese	---	---	---	---	---	---
Tanzanian	---	---	---	---	---	---
Kenyan	---	---	---	---	---	---
Other	2.9	.07	1.6	---	---	---
Refugee Status						
Total	**N = 103**	**N = 142**	**N = 245**	**N = 46**	**N = 49**	**N = 95**
Refugee	94.2	91.5	92.6	---	---	---
Not refugee	4.8	8.4	6.9	100.0	100.0	100.0
Marital Status						
Total	**N = 103**	**N = 142**	**N = 245**	**N = 47**	**N = 49**	**N = 96**
Currently married	31.1	38.0	35.1	6.4	10.2	8.3
Never married	66.0	55.6	60.0	89.4	89.8	89.6
Divorced/separated	1.9	3.5	2.9	---	---	---
Widowed	---	2.1	1.2	---	---	---
Religious affiliation						
Total	**N = 103**	**N = 142**	**N = 245**	**N = 47**	**N = 49**	**N = 96**
Catholic	24.3	19.0	21.2	36.2	46.9	41.7
Protestant	70.9	76.1	73.9	53.2	40.8	46.9
Muslim	1.9	2.1	2.0	4.3	10.2	7.3
Other	1.9	1.4	1.6	6.4	2.0	4.2
Education						
Total	**N = 103**	**N = 142**	**N = 245**	**N = 47**	**N = 49**	**N = 96**
None	1.9	9.1	6.1	29.8	16.3	22.9
Some primary	3.9	11.3	8.2	14.9	18.4	16.7
Primary completed	39.8	42.2	41.2	8.5	14.3	11.5
Secondary or higher	46.6	34.5	39.6	42.5	51.0	46.9
College	4.8	---	2.0	---	---	---
University	1.9	1.4	1.6	---	---	---

b) Circumcision

Circumcision among male refugees (85.4%) appears to be more common than among males in the surrounding communities (55.6%), although statistical comparison is not possible. The proportion of female respondents in both the refugee and surrounding populations was low, 2.1% and 4.1% respectively (Appendix III, Table A). Among those males who were circumcised, age at circumcision was similar for both refugees (median age at circumcision: 7 years) and surrounding community respondents (median age at circumcision: 5 years).

c) Displacement and mobility

The majority of refugee respondents, both males and females, indicated that they had been living in their communities for over five years (74.8% and 67.6%, respectively). Only 9.7% of males and 10.6% of females had been living in their current community for two years or less. In contrast, nationals in the surrounding communities appear relatively less settled with 44.7% of males and 40.8% of females reporting that they had been in the current community for two years or less, and less than half (43.7%) of all nationals indicating that they had been in the area for more than five years (Appendix III, TableB).

Inasmuch as the farm worker population may settled in their current community for less time than the refugees, they also appear to be more mobile. Almost 65% of respondents in the surrounding

communities had experienced a prolonged absence (i.e. absence from their community for a period of at least one continuous month in the past 12 months), with a higher proportion of females (77.5%) reporting this compared to males (51.1%). There was no statistically significant difference between males and females reporting a prolonged absence within the refugee population, and the proportion of all refugees who had a prolonged absence within the past 12 months was about half that of the respondents in the surrounding communities (32.6% for refugees, compared to 64.6% in the surrounding communities) (Appendix III, Table B). As already indicated in the core indicators table, among nationals, a much higher proportion of respondents in the younger age group (79.5% of men and women aged 15-24 years) had a prolonged absence, compared to those in the 25-49 year age group (51.9%). However, as with all of the survey's results it is important to remember that the number of respondents is small and differences may not be statistically significant. It is also important to bear in mind that refugees might have tended to underreport mobility, since they need a permit from the camp authorities to leave the camp, and it is possible that in several occasions they don't ask for it.

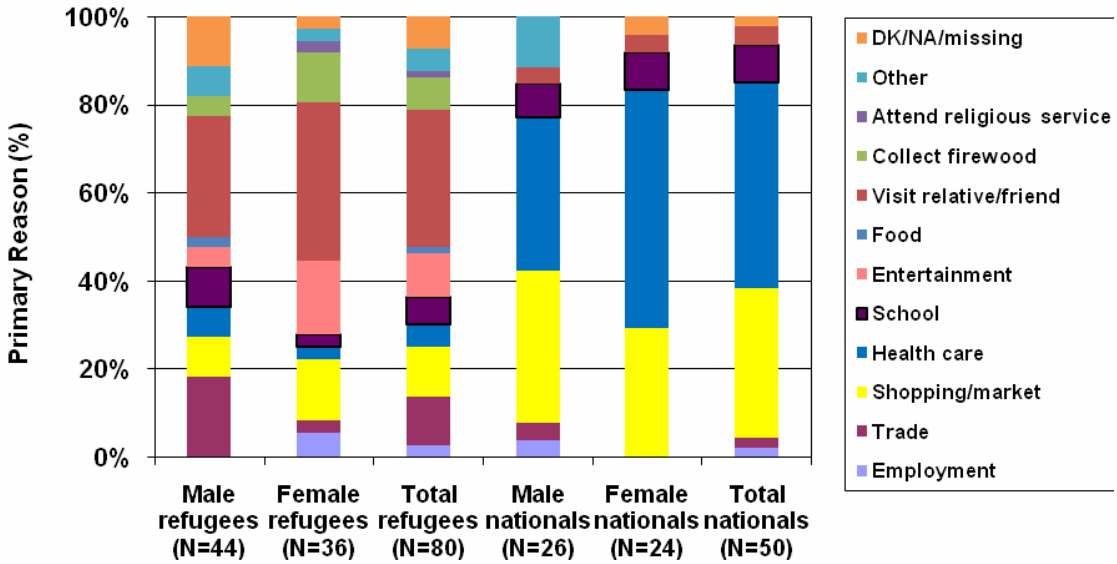
Among those who reported a prolonged absence, there were clear differences across refugee and farm worker populations in terms of the reasons for absence. Within the sample of nationals, the most commonly reported reason for prolonged absence was family-related (40%). Comparatively fewer refugees, 21% indicated that the reason for prolonged absence was family-related. Similar proportions of refugees reported the main reason as being for trade (21%) and holidays (22%). A notable difference across genders was seen in the sample of nationals, among whom more females (45%) than males (33%) said the reason for prolonged absence was family-related, whereas a larger proportion of males (37.5%) than females (10.5%) with a prolonged absence said this was school-related.

Compared to differences across populations in prolonged absence, the refugees and nationals sampled for this survey were more similar in terms of proportions who visit the surrounding community on a regular basis. Almost 21% of refugees and 29% of nationals reported visiting the surrounding community one or more times per month. For both samples, this was higher among males than females (25.2% of refugee males and 17.6% of refugee females, compared to 38.3% of male nationals and 20.4% of female nationals). Among respondents who indicated that they visit the surrounding community, there were notable differences between refugees and nationals in terms of reason for the most recent visit. The predominant reason among nationals (44%), both males (35%) and females (54%), was health care. Shopping/market was also reported with some frequency (32%) by respondents in the surrounding communities. Refugees' reasons for the most recent visit to the other community were more diverse, with the predominant reason being to visit friends/relatives (31%). Very few refugees reported visiting the surrounding communities for either health care (5%) or shopping/market (11%). However, 11% of refugees also indicated trade as the reason for their most recent visit, including 18% of male respondents who visit the surrounding community (Figure 1).

Recommendation:

- Mobility and exchange between the refugee community and nationals are quite regular, particularly in terms of nationals seeking health care and trade/market activities. HIV prevention interventions should target both communities in markets and in the health centre.

Figure 1. Reason for visiting other community



d) Alcohol and drug use

Reported alcohol and drug use was extremely low among refugee respondents, among whom 90.1% indicated that they never take drinks containing alcohol, though with some difference (not statistically significant) between male refugee respondents (85.3%) and females (93.6%). Nationals indicated alcohol consumption in higher proportions than refugees, with 27.7% of males and 19.6% of females saying that they had taken drinks containing alcohol at least once a month in the past four weeks, though it is not possible to say whether or not any difference across populations is statistically significant (Appendix III, Table C). Reported drug use in both populations is extremely minimal, with only one refugee respondent and 3 nationals indicating that they had taken any recreational drugs that they did not get at a medical facility or from a health professional within the past 12 months. There was no reported drug use in either population.

e) Sexual behavior

The reported median age at first sex in this sample was slightly lower among refugees (17 years) compared to nationals (18 years). In this sample, it was also somewhat lower for females than for males in both the refugee and farm worker population (Table 3). As noted in the table of core indicators, the proportion of respondents in the 15-24 year age group who indicated that they had sexual intercourse before age 15 was low in both the refugee population sample (8.6%) and among the sampled nationals (11.4%). However, it appears that a fairly large proportion of never-married young people aged 15-24 in both populations may be sexually active. Roughly half of unmarried refugee respondents in this age group and 67.4% in the surrounding communities indicated that they had had sex (Table 1). Table 4 below presents more specific data for age groups showing that this appears especially common within the 20-24 years age group.

The median age at marriage for nationals (27 years) appears to be higher than for refugees (21 years) and driven by the higher median age at first marriage for male nationals (38 years) compared to female nationals (21 years). Again, it is not possible to say whether or not these differences are statistically significant though the magnitude of difference appears to be large and might indicate an actual difference of some level and fits with the observation that a relatively smaller proportion of respondents in the surrounding communities indicated that they were married, compared to refugees.

Table 3. Age at first sexual intercourse and first marriage

	Osire refugees			**Surrounding nationals**		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Median age at first sex (years)[a]	*N = 66* 18	*N = 111* 16.5	*N = 177* 17	*N = 36* 18	*N = 45* 17	*N = 81* 18
Median age first married (years)[b]	*N =35* 25.5	*N =63* 18	*N = 98* 21	*N* = 5 38	*N = 5* 21	*N =10* 27

[a] Denominator: those who have ever had sex
[b] Denominator: those who have ever married

In this survey, a regular sex partner was defined as a spouse or live-in sexual partner. A casual sex partner was defined as any sexual partner different from the one with whom the respondent was living or married to at the time of the survey and from whom the respondent did not receive or give money, gifts or favors for sex. A transactional sex partner was defined as any sexual partner with whom the respondent had sex in exchange for money, a gift, or a favor. In this sample, a larger proportion of nationals who ever had sex (85.2%) reported that they had sex with a regular partner in the past 12 months compared to refugees (66.1%), though it is not possible to say whether or not this difference is statistically significant. Few respondents in either group (6.5% of refugees, and 5.2% of nationals) indicated that they had more than one sex partner in the past 12 months (Table 1) and of the respondents who said they had a regular sex partner in the past 12 months, very few in either group reported that they had multiple partners in the past 12 months (9.4% refugees and 7.25% of nationals).

The proportion of respondents in this sample who said that they had a casual sex partner in the past 12 months was low across populations and across age groups. For respondents 15-49 years, 6.8% of refugees and 7.4% of nationals had a casual partner in the past 12 months. For the 15-24 year age group, this applied to 8.8% of refugees and 6.7% of nationals. The main difference between groups is noted in comparisons of gender. Among younger refugees and nationals (15-24 years) it appears that more males than females had a casual sex partner in the past 12 months (refugees: 20.8% males vs. 2.3% females, and nationals: 16.7% males and 0 females). Interestingly, the trend may be reversed in the older age group where among 25-49 year old respondents more females in this sample reported a casual sex partner in the past 12 months compared to males (refugees: 7.6% of females vs. 2.4% of males, and nationals: 11.1% of females and 4.2% of males). Notably, sample sizes were small and it is important to remember that these apparent differences may not reflect trends in the populations in general, and even differences between genders within the refugee population were not statistically significant (Table 4).

Even fewer respondents indicated recent transactional sex partners. Among respondents who ever had transactional sex, 2.8 of refugee respondents and 1.2 of nationals (one individual) said they had a transactional sex partner within the past 12 months. Transactional sex in the younger age group appears to be uncommon. No respondents in the 15-24 year age category reported transactional sex in the past 12

months. For refugees in this age group, this applied to 16.7% of males, and no females (Table 4). Among respondents who have *ever* had a transactional sex partner, the type of exchange made at last transactional sex was identified as either money or favors, but not gifts. Ten refugees indicated they had ever had transactional sex, among whom the type of exchange was money for 4 respondents and a favor for 6 respondents. Of the two nationals who had ever experienced transactional sex, 1 indicated that the last transactional sex was for money and the other indicated it was for a favor. Within the refugee community, the reported behavior seems not to correspond with the number of pregnancies among teenagers (18 in 2008, 12% of all births in Osire).

Because of the small numbers of respondents, both refugees and nationals, who reported casual and transactional sex in the past 12 months, it is difficult to ascertain realistic estimates for condom use within groups who experience these types of sexual partnerships, especially with regard to transactional sex. However, results obtained indicate that for all ages (15-49 years), some condom use within these partnerships is likely occurring especially by males. Of the 12 refugee respondents who reported casual sex within the past 12 months, 41.7% indicated that a condom was used at last casual sex (66.7% of 6 males and 16.7% of 6 females). Of the six respondents from the surrounding communities who reported casual sex within the past 12 months, all three males and one of three females reported condom use at last casual sex. Because of the small number of respondents reporting recent casual sex, results for consistent condom use in the past 12 months closely reflects condom use at last casual sex (Table 4). Of those who had a casual sex partner within the past 12 months and who did not use a condom at last casual sex (7 refugee and 2 nationals), the main reasons for not using a condom at last casual sex were that the respondent didn't think of using one, didn't like condoms, or trusted their partner (Figure 2).

Similar to condom use at last casual sex, results for consistent condom use with transactional sex partners are identical to results for condom use during last transactional sex, with very small numbers in the refugee population and even fewer among nationals. Of the four male refugees who reported transactional sex in the past 12 months, two indicated condom use at last transactional sex and two indicated consistent condom use with their transactional partner in the past 12 months (Table 4).

Table 4. Casual and transactional sex partners among people ever reporting having had sex

		Osire refugees			Surrounding nationals		
		Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Casual partner							
15-24 yrs	Had casual partner in past 12 months[a]	*N = 24* 20.8 (9.4, 40.0)	*N = 44* 2.3 (.03, 14.2)	*N = 68* 8.8 (4.3, 17.3)	*N =12* 16.7	*N = 18* 0	*N = 30* 6.7
	Used condom during last sexual intercourse with casual partner[b]	*N =5* 60.0 (10.3, 95.1)	*N =1* 100.0	*N = 6* 66.7 (14.9, 95.8)	*N = 2* 100.0	0	*N =2* 100.0
	Consistent condom use with casual partner in past 12 months[b]	*N = 5* 60 (10.3, 95.1)	*N = 1* 100.0	*N = 6* 66.7 (14.9, 95.8)	*N = 2* 100.0	0	*N =2* 100.0
25-49 yrs	Had casual partner in past 12 months[a]	*N = 42* 2.4 (.03, 16.5)	*N = 66* 7.6 (2.0, 24.6)	*N = 108* 5.5 (1.8, 15.7)	*N = 24* 4.2	*N = 27* 11.1	*N = 51* 7.8
	Used condom during last sexual intercourse with casual partner[b]	*N = 1* 100	*N = 5* 0	*N = 6* 16.7 (.02, 94.3)	*N = 1* 100.0	*N = 3* 33.3	*N = 4* 50.0
	Consistent condom use with casual partner in past 12 months[b]	*N = 1* 100	*N = 4* 0	*N = 5* 20.0 (.03, 99.5)	*N = 1* 100.0	*N = 3* 66.7	*N = 4* 75.0
15-49 yrs	Had casual partner in past 12 months[a]	*N = 66* 9.1 (4.2, 18.5)	*N = 111* 5.4 (1.7, 15.6)	*N = 177* 6.8 (3.6, 12.2)	*N = 36* 8.3	*N = 45* 6.7	*N = 81* 7.4
	Used condom during last sexual intercourse with casual partner[b]	*N = 6* 66.7 (20.2, 94.0)	*N = 6* 16.7 (1.1, 77.8)	*N = 12* 41.7 (12.3, 78.4)	*N = 3* 100.0	*N =1* 33.3	*N = 6* 66.7
	Consistent condom use with casual partner in past 12 months[b]	*N = 6* 66.7 (19.4, 94.3)	*N = 5* 20.0 (1.1, 85.0)	*N =11* 45.4 (12.2, 83.2)	*N = 3* 66.7	*N =3* 66.7	*N = 6* 66.7
Transactional partner							
15-24 yrs	Had transactional partner in past 12 months[c]	*N = 24* 16.7 (4.8, 44.4)	*N = 44* 0	*N = 68* 5.9 (1.8, 17.6)	*N =12* 0	*N = 18* 0	*N = 30* 0
	Used condom during last sex with transactional partner[d]	*N = 4* 50.0 (2.3, 97.6)	*N = 0*	*N = 4* 50.0 (2.3, 97.6)	0	0	0
	Consistent condom use with transactional partner in past 12 months[d]	*N = 4* 50.0 (2.3, 97.6)	*N = 0*	*N = 4* 50.0 (2.3, 97.6)	0	0	0
25-49 yrs	Had transactional partner in past 12 months[c]	*N = 42* 0	*N = 66* 1.5 (.02, 10.4)	*N = 108* .09 (.01, 6.5)	*N = 24* 4.2	*N = 27* 0	*N = 51* 2.0
	Used condom during last sex with transactional partner[d]	*N = 0*	*N = 1* 0	*N =1* 0	*N = 1* 100.0	0	*N = 1* 100.0
	Consistent condom use with transactional partner in past 12 months[d]	*N = 0*	*N = 1* 0	*N =1* 0	*N = 1* 100.0	0	*N = 1* 100.0
15-49 yrs	Had transactional partner in past 12 months[c]	*N = 66* 6.1	*N = 111* .09	*N = 177* 2.8	*N = 36* 2.8	*N = 45* 0	*N = 81* 1.2

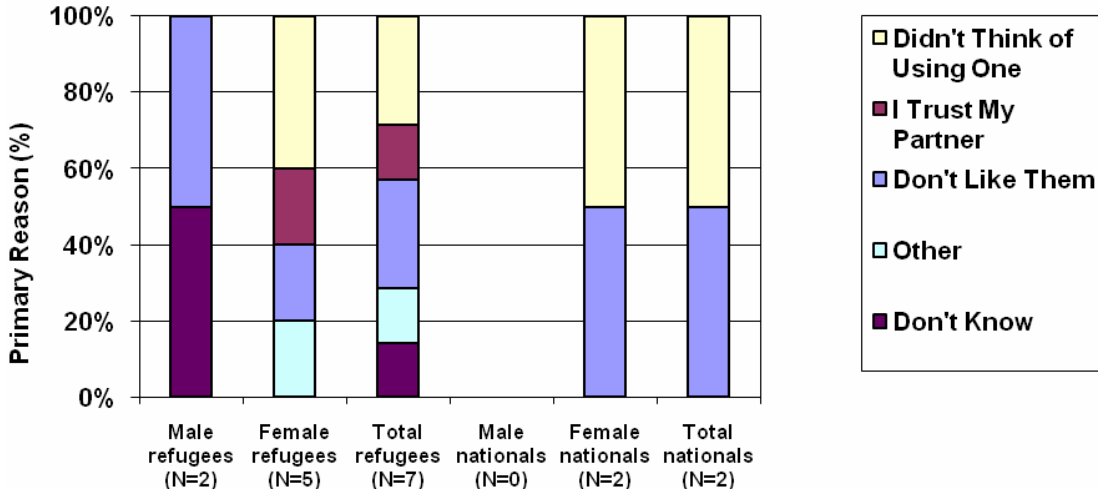
		(1.7, 19.1)	(.01, 6.5)	(1.0, 7.7)			
	Used condom during last sex with transactional partner[d]	*N = 4* 50.0 (6.9, 93.1)	*N = 1* 0	*N =5* 40.0 (4.7, 90.0)	*N = 1* 100.0	0	*N = 1* 100.0
	Consistent condom use with transactional partner in past 12 months[d]	*N = 4* 50.0 (6.9, 93.1)	*N = 1* 0	*N =5* 40.0 (4.7, 90.0)	*N = 1* 100.0	0	*N = 1* 100.0
Unmarried, have had sex in the last 12 months[e]							
15-19 yrs		*N = 59* 28.8 (18.5, 41.8)	*N = 60* 35.0 (22.3, 50.3)	*N = 119* 32.0 (23.3, 42.0)	*N =21* 38.1	*N = 22* 77.3	*N = 43* 58.1
20-24 yrs		*N = 11* 45.4 (20.9, 72.4)	*N = 26* 61.5 (32.7, 84.0)	*N = 37* 56.8 (35.1, 76.1)	*N = 21* 71.4	*N = 22* 100.0	*N = 43* 86.0
15-49 yrs		*N = 70* 31.4 (20.4, 45.1)	*N = 87* 42.5 (29.8, 56.3)	*N = 157* 37.6 (27.9, 48.4)	*N = 42* 54.8	*N = 44* 88.6	*N = 86* 72.1

[a] Denominator: those who have ever had sex
[b] Denominator: those who had sex with a casual partner in the last 12 months
[c] Denominator: those who have had sex with a transactional partner
[d] Denominator: those who have had sex with a transactional partner in the past 12 months
[e] Denominator: those who are not currently married
N= stands always for the denominator to calculate the corresponding percentage

Recommendations:

- Age at first sex is relatively low in both communities. Early education on sex and reproductive health should be strengthened at the school and through the many task forces currently active in Osire.
- Multiple concurrent partnership is not an extended practice in Osire camp and surroundings. Education campaigns should continue to maintain this healthy sexual behaviour.
- The number of respondents who were engaged on transactional and casual sex is too small to draw conclusions on condom use among refugees and nationals. The most we can say is that condom promotion should continue among all age groups, but especially among adults.

Figure 2. Main reason for no condom use at last sex with causal partner



f) Forced sex

To measure the proportion of respondents who had experienced forced sex, respondents were asked: "Have you been forced to have sex against your will in the past 12 months?" In the table of core indicators (Table 1) the proportion of women who indicated having had this experience in the past 12 months was 3.5% for refugees and 4.1% for nationals. Results in Appendix III, Table D, show an estimated 4.5% of female refugees who ever had sex and 4.4 of female nationals who ever had sex, indicated that they had experienced sex against their will within the past 12 months. No male nationals said they had experienced forced sex within the past 12 months. However, 8.3% of male refugees in the 15-24 year age group reported this experience. Forced sex among female refugees was also higher in the 15-24 year age group (6.8%) compared to adult females 25-49. As with other comparative statistics of interest, the number of respondents in these categories was very small and there was no statistically significant difference between age groups for refugees. However, this trend makes sense in light of general global statistics that indicate younger individuals are often more vulnerable to forced sex than adults. Of the six refugee respondents who indicated forced sex in the past 12 months, five identified their regular sex partner as the perpetrator of forced sex and one said it was a non-family member. Of the two nationals who reported forced sex within the past 12 months, one said the perpetrator was their regular sex partner while the other identified the perpetrator as someone outside the family.

g) Condom knowledge and use

The majority of both refugees (89.4%) and nationals (95.8%) said that they had ever heard of condoms. Within populations there were not major differences across gender groups (Appendix III, Table E). The most commonly cited use for condoms in general, for both refugees (89%) and respondents in surrounding communities (95.8%), was protection against STI/HIV/AIDS. Females in both groups, compared to males, reported more frequently that condoms are also used to prevent pregnancy (52.8% of

female refugees, 11.4% of female nationals). Female refugee respondents (22.8) also highlighted the use of condoms for family planning. Among respondents who had ever heard of condoms, more respondents in surrounding communities (67%) than refugees (36%) had ever used a condom. More female respondents in the surrounding communities (75%), compared to males (59.6%), reported ever using a condom though it is not possible to determine whether or not this difference is statistically significant. There does not seem to be any major difference across genders within the refugee population. Among refugees, it seems that a greater proportion of female respondents in the 15-24 year age group (40.9%) had ever used condoms, compared to female refugees in the 25-49 year age group (29%) although this difference is not statistically significant. As in many populations in general, it appears that education level may influence condom use in both the refugee and surrounding community populations. A greater proportion of both refugee respondents (63.3%) and nationals (54.1%) who reported ever having used a condom had completed secondary school.

Among those respondents who had ever used a condom, 89.8% of refugees and 98.4% of nationals said they knew where to get a condom. Overwhelmingly, both populations identified the health facility as the primary place where they seek condoms (70.4% of refugees, 91.7% of nationals) (Appendix III, Figure B). No major difference between genders was observed in this respect, though male refugees reported a greater variety of primary places where they seek condoms compared to either female refugees or male nationals. Other locations where male refugees reported seeking condoms include community health workers, at a local shop, from friends, at the market, and at the pharmacy. However, the proportion of male respondents who identified any of these other locations was quite small. Very few respondents, either refugees or nationals, indicated that they were unable to obtain a condom whenever needed. Among those who did, the primary constraint in obtaining condoms, as most commonly reported by refugees was that condoms generally were not available. Among the few respondents who reported any problem in obtaining condoms, primary constraints specifically noted were that condoms are too expensive, the source of condoms is too far away, and condoms are generally not available. Again, the numbers of responses in these categories are very small (Appendix III, Figure C).

Recommendation:

- Condoms are widely available in Osire, refugees seem to be knowledgeable about condoms, but utilization rate remains low. Focus group discussion should be conducted to get a better understanding about this issue.

h) Sexually transmitted infections

Most refugees (88.2%) and respondents from surrounding communities (91.7%) said that they had ever heard about diseases that can be transmitted through sexual intercourse. No notable differences across genders were noted in either population sample. A small proportion of refugees (3.7%) and somewhat larger proportion of nationals in this sample (5.2%) reported that they had an unusual genital discharge within the past 12 months (Appendix III, Table F). Even smaller proportions of refugees (2.4%) and nationals (1%) indicated that they had any genital ulcer or sore within the past 12 months. Among those who indicated that they had any genital discharge, ulcer or sore within the past 12 months, similar proportions of refugees (41.7%) and nationals (40%) said they had sought treatment for the condition. It is not possible to determine whether or not these proportions are statistically significant at the population level given the small number of respondents falling into this category. It is also not possible to say whether or not there is a statistically significant difference between genders within the refugee population, however it is noted that a considerably smaller proportion of female refugee respondents who had an STI symptom within the past 12 months sought treatment (20%) compared to males (57.1%). Of the few individuals with STI symptoms within the past 12 months who sought treatment, all received treatment at a public health center.

i) Knowledge, opinions, and attitudes towards HIV/AIDS

As outlined in the table of core indicators (Table 1), 38.4% of refugees and 32.2% of respondents in the surrounding communities had a comprehensive correct knowledge of HIV/AIDS. In this research, comprehensive correct knowledge of HIV/AIDS refers to knowledge that condoms prevent HIV, sex with one faithful, uninfected partner is protective against HIV, does not think that mosquitoes transmit HIV, does not think that sharing food with an HIV infected individual transmits the virus, and knows that a healthy-looking HIV-infected individual can transmit the virus. The table of core indicators also highlights results of analysis on accepting attitudes towards people living with HIV/AIDS. In this research, this was defined as being willing to care for an HIV-infected individual in one's own household, buying fresh vegetables from a shopkeeper known to be HIV-infected, agreeing that an HIV-infected teacher should be allowed to continue working, and not wanting to hide or keep secret that a member of one's family is HIV-infected. Just before the data collection started, AHA conducted a 13 days campaign of activism that included HIV events and information sessions, inclusive of door to door activities; this campaign took place only in the camp and not in the surrounding farms. Among refugee respondents, 30.6% were found to have accepting attitudes towards persons living with HIV. A smaller proportion of respondents living within the surrounding communities (18.7%), had accepting attitudes, though it is not possible to determine whether or not this difference is statistically significant. More detail on knowledge, opinions, and attitudes towards HIV/AIDS follows.

For both refugees and nationals who had ever heard of HIV, knowledge about HIV transmission routes varies depending on the indicator (Table 5). The transmission route that was known to the highest percentage of both refugees and nationals was injection with a needle that was already used by someone else (92.3% of refugees, 94.8% of nationals). The transmission route identified by the lowest proportion of refugees (70%) was transmission by an HIV-positive pregnant mother to her unborn child during pregnancy or delivery, which was lowest among female refugee respondents (67.9%). Among nationals, the transmission route that was least commonly identified was anal sex with a male partner without using a condom (72.9%) which was very similar across gender groups.

Table 5. Knowledge of HIV and its transmission

	Osire refugees			**Surrounding nationals**		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Percentage of respondents who say						
They have heard of HIV Yes	*N = 103* 93.2 (87.4, 96.4)	*N = 142* 96.5 (91.9, 98.5)	*N = 245* 95.1 (92.0, 97.0)	*N = 47* 100.0	*N = 49* 100.0	*N = 96* 100.0
Staying faithful to one uninfected faithful partner is protective[a] Yes	*N = 96* 78.1 (68.6, 85.4)	*N = 137* 89.8 (83.2, 94.0)	*N = 233* 85.0 (81.2, 88.1)	*N = 47* 89.4	*N = 49* 95.9	*N = 96* 92.7
Using condom every time correctly when having sex is protective[a] Yes	*N = 96* 83.3 (75.3, 89.1)	*N = 137* 75.9 (66.5, 83.3)	*N = 233* 79.0 (73.0, 83.9)	*N = 47* 89.4	*N = 49* 93.9	*N = 96* 91.2
Anal sex with a male partner without a condom is high risk[a] Yes	*N = 96* 80.2 (70.1, 87.5)	*N = 137* 81.7 (71.6, 88.8)	*N = 233* 81.1 (73.6, 86.9)	*N = 47* 72.3	*N = 49* 73.5	*N = 96* 72.9

Sharing needles may lead to infection[a] Yes	*N = 96* 89.6 (80.2, 94.8)	*N = 137* 94.2 (88.4, 97.1)	*N = 233* 92.3 (87.6, 95.3)	*N = 47* 95.7	*N = 49* 93.9	*N = 96* 94.8
HIV can infect an unborn child during pregnancy or delivery[a] Yes	*N = 96* 72.9 (63.2, 80.9)	*N = 137* 67.9 (59.0, 75.7)	*N = 233* 70.0 (63.2, 75.9)	*N = 47* 87.2	*N = 49* 81.6	*N = 96* 84.4
Breastfeeding can transmit HIV if mother is infected[a] Yes	*N = 96* 86.5 (77.1, 92.4)	*N = 137* 90.5 (84.5, 94.3)	*N = 233* 88.8 (83.8, 92.5)	*N = 47* 89.4	*N = 49* 98.0	*N = 96* 93.7

[a] Denominator: those who have heard of HIV
N stands for the denominator used to calculate the corresponding percentage underneath

Table 6 highlights the proportion of respondents who correctly rejected common misconceptions about HIV transmission routes and other HIV/AIDS myths. Although the highest proportion of both refugee and farm worker respondents who had ever heard of HIV (87.1% and 78.1%, respectively) indicated that people cannot get HIV by sharing food with an infected individual, relatively fewer nationals (58.3%) rejected the misconception that one can become HIV-infected through mosquito bites. This was quite a bit lower than among refugee respondents, of whom 74.7 rejected this transmission route. More refugees (71.2%) compared to nationals (64.6%) also correctly responded that a healthy looking individual can be HIV-positive. It cannot be determined whether or not these differences in proportions are statistically significant

Table 6. Rejection of misconceptions about AIDS

	Osire refugees			**Surrounding nationals**		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Percentage of respondents who know that						
People cannot get HIV from mosquito bites [a]	*N = 96* 81.2 (70.9, 88.5)	*N = 137* 70.1 (59.7, 78.7)	*N = 233* 74.7 (65.9, 81.8)	*N = 47* 44.7	*N = 49* 71.4	*N = 96* 58.3
People cannot get HIV by sharing food with an infected person [a]	*N = 96* 86.5 (77.0, 92.4)	*N = 137* 87.6 (80.8, 92.2)	*N = 233* 87.1 (81.9, 91.0)	*N = 47* 83.0	*N = 49* 73.5	*N = 96* 78.1
A healthy looking person can be infected with HIV [a]	*N = 96* 73.0 (62.5, 81.3)	*N = 137* 70.1 (58.5, 79.6)	*N = 233* 71.2 (61.5, 79.3)	*N = 47* 61.7	*N = 49* 67.3	*N = 96* 64.6

[a] Denominator: those who have heard of HIV . N stands in each cell for the corresponding denominator.

There is variation across populations in terms of attitudes towards people who are HIV-infected. Again, it is not possible to determine whether or not these differences are statistically significant but across the indicators provided in the table show some interesting trends that possibly refer to more accepting attitudes among refugees. The analysis indicates that 70.8% of nationals, and only 42.1% of refugees, think that if a family member is infected with HIV it should remain a secret. As well, a much higher proportion of nationals (96.9%), compared to refugees (75.5%) said that young adolescents should not be taught how to use condoms. A greater proportion of nationals (96.9%) compared to refugees said that if a relative was sick with AIDS they would not care for the individual at home, though among refugees the proportion was also high (89.3%). Smaller differences were noted in indicators related to whether or not an HIV-positive teacher should be allowed to continue teaching, and whether or not the respondent would by vegetables from a shopkeeper known to be HIV-infected. Within the refugee population sample, the greatest difference between genders was noted in the first indicator, whereby 36.5% of females and 50%

of males said that if a family member is HIV-infected it should be kept a secret. Again, it cannot be determined whether or not this is a statistically significant difference. Interestingly, the same magnitude of difference between the genders on this particular indicator is observed within the sample of respondents from surrounding communities though in the opposite direction, with more females than males agreeing with the statement.

Table 7. Attitudes towards people who are HIV-infected

	Osire refugees			**Surrounding nationals**		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Percentage of respondents who say that[a]						
If a family member is infected with HIV it should remain a secret	*N = 96* 50 (40.9, 59.1)	*N = 137* 36.5 (26.0, 48.4)	*N = 233* 42.1 (34.8, 49.7)	*N = 47* 63.8	*N = 49* 77.5	*N = 96* 70.8
If a teacher had HIV he should NOT be allowed to continue teaching	*N = 96* 74.0 (61.6, 83.4)	*N = 137* 77.4 (67.5, 84.9)	*N = 233* 76.0 (67.8, 82.6)	*N = 47* 83.0	*N = 49* 79.6	*N = 96* 81.2
If a relative was sick with AIDS they would NOT care for them at home	*N = 96* 85.4 (76.4, 91.4)	*N = 137* 92.0 (84.4, 96.0)	*N = 233* 89.3 (84.1, 92.9)	*N = 47* 95.7	*N = 49* 98.0	*N = 96* 96.9
They would NOT buy vegetables from an HIV positive shopkeeper	*N = 96* 70.8 (59.5, 80.1)	*N = 137* 70.1 (60.4, 78.3)	*N = 233* 70.4 (62.7, 77.1)	*N = 47* 63.8	*N = 49* 75.5	*N = 96* 69.8
Young adolescents should NOT be taught how to use condoms	*N = 96* 76.0 (68.4, 82.3)	*N = 137* 75.2 (65.1, 83.1)	*N = 233* 75.5 (68.7, 81.3)	*N = 47* 93.6	*N = 49* 100.0	*N = 96* 96.9

[a] Denominator: those who have heard of HIV .
N stands always for denominator used to calculate the percentage underneath.

Among those who had ever heard of HIV, a greater proportion of refugees (57.1%) compared to nationals (32.3%) thought that they had no chance of getting HIV (Appendix III, Table G). Among nationals, 47.9% thought they had a moderate chance of getting HIV, with a higher proportion of females (55.1%) reporting this perception compared to males (40.4%). Among refugees, more males (18.7%) than females (9.5%) were ambivalent on this point, indicating either no answer or that they didn't know.

Recommendations:

- Comprehensive knowledge on HIV/AIDS is relatively low among refugees and nationals, despite most of them having heard of HIV. Education campaigns should continue, stressing HIV transmission routes and prevention measures.
- Both refugees and nationals show discriminatory attitudes towards people who are living with HIV. Some trainings and workshops have been conducted to address HIV stigma among refugees during the last three years; innovative approaches might be needed to obtain a real attitudinal change.

j) Exposure and access to information about HIV/AIDS

Among refugees who had heard of HIV/AIDS, 81% of males (71.7, 88.0) and 86.1% of females (76.9, 92.1) had received information on HIV/AIDS in the past 12 months. The proportion of respondents from surrounding host communities who had received information on HIV/AIDS in the past 12 months was slightly lower at 70.2% of males and 79.6% of females. Both refugees and nationals reported receiving

information about HIV/AIDS from a wide variety of sources, though among nationals the greatest proportion of respondents had received HIV/AIDS information in the past 12 months through the radio (Figure 3). Radio, TV/video, and the health facility were common sources of information for reported by refugees. For both refugees and nationals, the single most commonly indicated preferred source of HIV/AIDS information was the health facility, especially for female respondents in the surrounding communities (Figure 4). There was however quite a bit of variation in preferred sources of information about HIV/AIDS for both refugees and nationals.

Among respondents who had ever heard of HIV, roughly similar proportions of refugees (58.4%) and nationals (53.1%) had ever been tested for HIV (Table 8). In both populations, a greater proportion of females compared to males (refugees: 74.4% females and 35.4% males; nationals: 69.4% females and 36.2% males) had ever been tested for HIV, though it is not possible to determine whether or not these differences are statistically significant. Among respondents who had ever had an HIV test, there was a greater difference between refugees and respondents surrounding communities in terms of testing within the past 12 months (refugees: 70.4%; nationals: 62.7%). Pre-test counseling for both genders and both population groups at the last HIV test within the past 12 months was almost universal and almost all respondents had received the results of their most recent HIV test within the past 12 months. A smaller proportion of refugees (71.3%) compared to nationals (100%) who had an HIV test within the past 12 months reported that it was voluntary.

A similar proportion of female refugees (57.1%) and nationals (60.9%) indicated that they had been pregnant at some time during the past five years (Appendix III, Table H). The proportion of those in the 15-24 year age group was higher among nationals (47.6%) compared to refugees (37.7%) but it cannot be determined whether or not this is a statistically significant difference. Among those who had been pregnant during the past 5 years, antenatal care coverage was quite high in both populations, including 96.2% of refugees and 96.4% of nationals.

Recommendation:
- Exposure to HIV/AIDS information is good among refugee and local community. However, VCT uptake remains low among both communities, despite VCT availability at Osire health centre ensuring confidentiality. Outreach VCT in the different camp blocks and with different time schedules should be encouraged to increase VCT coverage.

Figure 3. HIV information: most frequently received sources among those who received HIV/AIDS info in the past 12 months

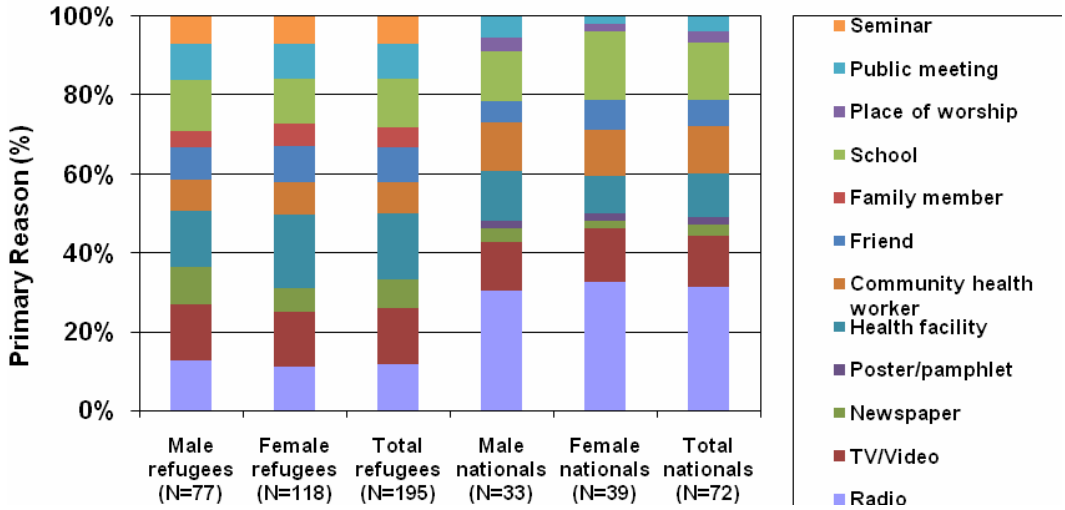


Figure 4. HIV information: most frequently preferred sources among those who have ever heard of HIV/AIDS

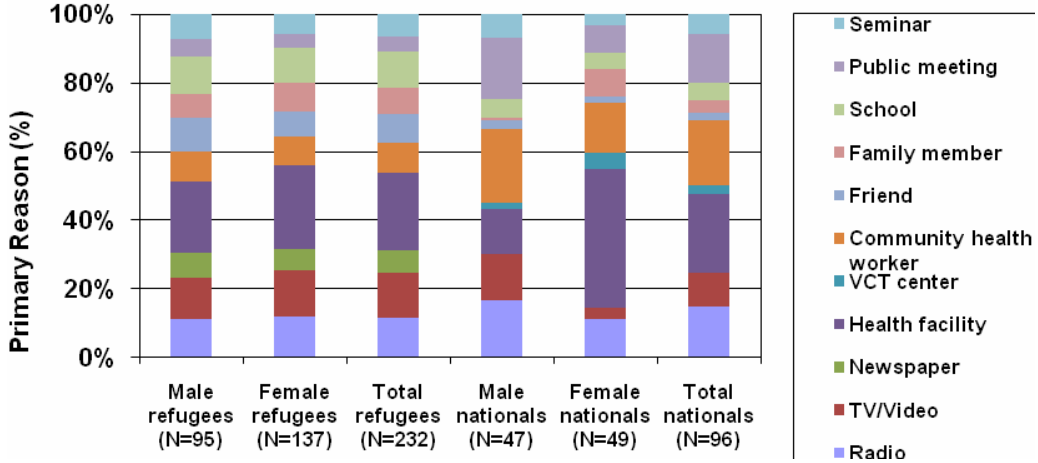
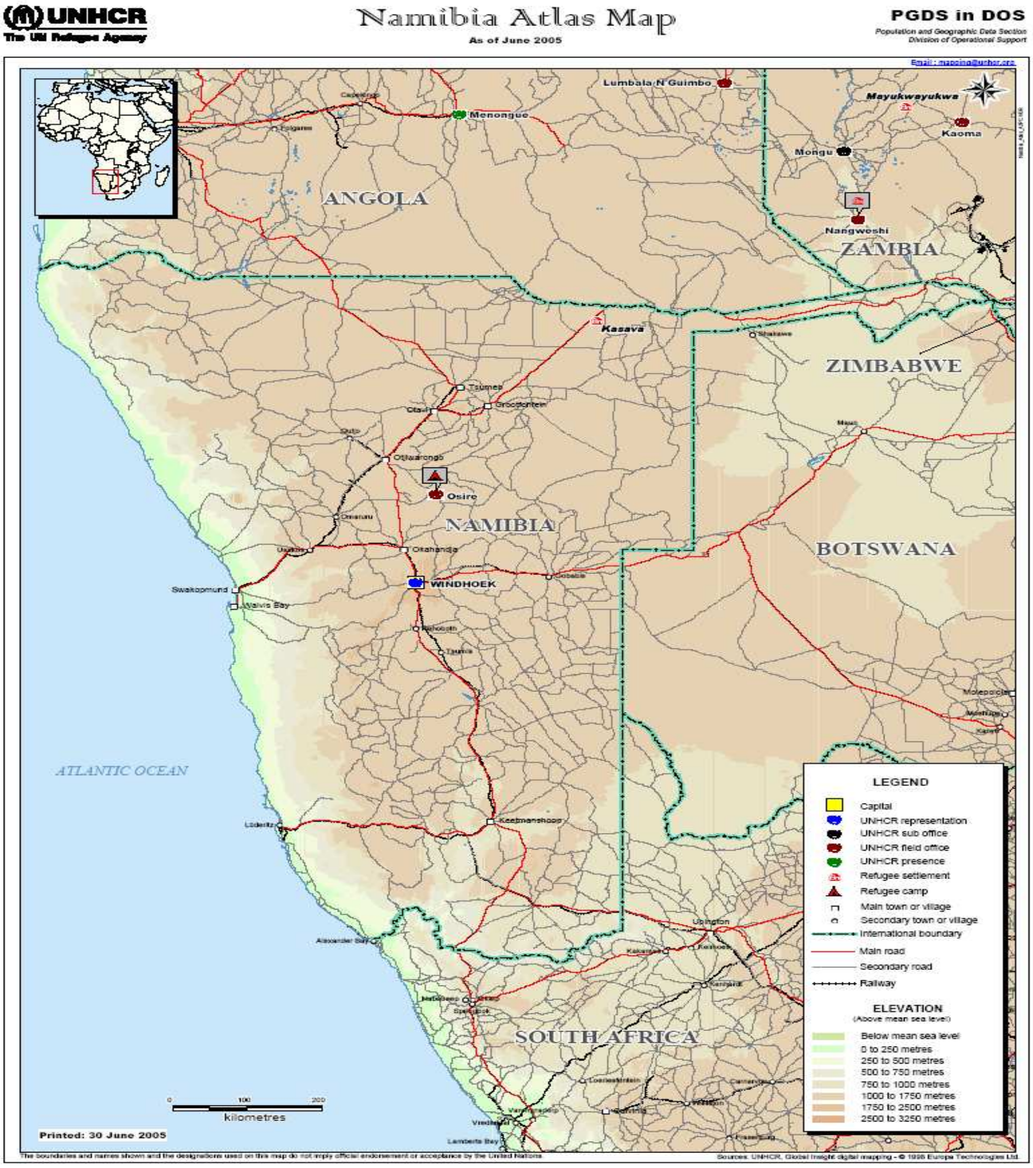


Table 8: Voluntary Counseling and Testing

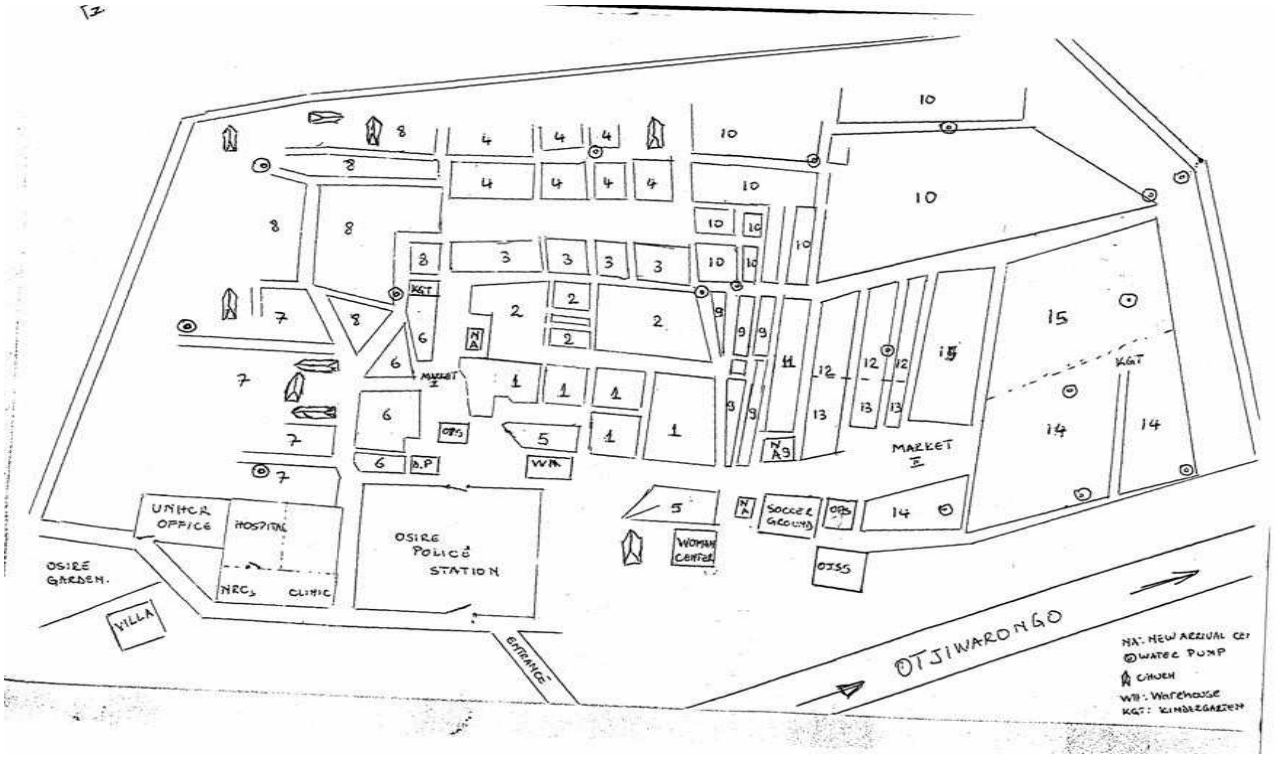
	Osire refugees			Surrounding nationals		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Ever been tested for HIV [a]	*N = 96* 35.4 (25.5, 46.7)	*N = 137* 74.4 (66.1, 81.3)	*N = 233* 58.4 (50.7, 65.6)	*N = 47* 36.2	*N = 49* 69.4	*N = 96* 53.1
Been tested in past 12 months [b]	*N = 33* 75.8 (60.4, 86.5)	*N = 102* 68.6 (57.8, 77.7)	*N = 135* 70.4 (61.2, 78.2)	*N = 17* 76.5	*N = 34* 55.9	*N = 51* 62.7
Last test had pre-test counseling [c] (within past 12 months)	*N = 25* 88.0 (69.9, 95.8)	*N = 70* 90.0 (80.0, 95.3)	*N = 95* 89.5 (81.2, 94.3)	*N = 13* 100.0	*N = 19* 94.7	*N = 32* 96.9
Last test voluntary [c, d] (within past 12 months)	*N = 25* 68.0 (42.3, 86.0)	*N = 69* 72.5 (61.0, 81.5)	*N = 94* 71.3 (59.8, 80.6)	*N = 13* 100.0	*N = 18* 100.0	*N = 31* 100.00
Last test – received results [c] (within past 12 months)	*N = 25* 96.0 (77.1, 99.4)	*N = 70* 100.0	*N = 95* 98.9 (92.9, 99.8)	*N =12* 100.0	*N = 18* 94.4	*N = 30* 96.7

[a] Denominator: those who have heard of HIV
[b] Denominator: those who have ever been tested for HIV
[c] Denominator: those who have been tested in the last 12 months
[d] Voluntary testing includes both response categories “I asked for the test” and “It was offered and I accepted”

Appendix I



UNHCR
The UN Refugee Agency
Namibia Atlas Map
As of June 2005
PGDS in DOS
Population and Geographic Data Section
Division of Operational Support
Lumbala N'Guimbo
Menongue
Mayukwayukwa
Kaoma
Mongu
Nangweshi
ANGOLA
ZAMBIA
Kasava
ZIMBABWE
Tsumeb
Grootfontein
Otjiwarongo
Osire
NAMIBIA
BOTSWANA
Okahandja
Swakopmund
Walvis Bay
WINDHOEK
Rehoboth
ATLANTIC OCEAN
Keetmanshoop
SOUTH AFRICA
Upington
kilometres
Printed: 30 June 2005
LEGEND
Capital
UNHCR representation
UNHCR sub office
UNHCR field office
UNHCR presence
Refugee settlement
Refugee camp
Main town or village
Secondary town or village
International boundary
Main road
Secondary road
Railway
ELEVATION
(Above mean sea level)
Below mean sea level
0 to 250 metres
250 to 500 metres
500 to 750 metres
750 to 1000 metres
1000 to 1750 metres
1750 to 2500 metres
2500 to 3250 metres


UNHCR OFFICE
HOSPITAL
NRC
CLINIC
OSIRE POLICE STATION
OSIRE GARDEN
VILLA
ENTRANCE
OTJIWARONGO
MARKET I
MARKET II
SOCCER GROUND
WOMAN CENTER
WH
KGT
NA: NEW ARRIVAL CEI
WATER PUMP
CHUCH
WH: WAREHOUSE
KGT: KINDERGARTEN

Appendix II: Additional Tables and Figures

Table A. Circumcision

	Osire refugees			Surrounding nationals		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Circumcised	*N =103*	*N =142*	*N = 245*	*N = 45*	*N = 49*	*N = 94*
Yes	85.4 (74.7, 92.1)	2.1 (.06, 92.1)	37.1 (30.5, 44.3)	55.6	4.1	28.7

Table B. Time in community, mobility and community interaction

	Osire refugees			Surrounding nationals		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Time in current community	*N = 103*	*N = 142*	*N = 245*	*N = 47*	*N = 49*	*N = 96*
2 years or less	9.7 (4.1, 21.3)	10.6 (6.4, 17.0)	10.2 (6.1, 16.6)	44.7	40.8	42.7
3-5 years	14.6 (8.1, 24.8)	20.4 (14.4, 28.1)	18.0 (13.3, 23.9)	8.5	16.3	12.5
More than 5 years	74.8 (62.7, 83.9)	67.6 (59.1, 75.1)	70.6 (63.5, 76.8)	44.7	42.9	43.7
Prolonged absence from home [a]	*N = 103*	*N = 142*	*N = 245*	*N = 47*	*N = 49*	*N = 96*
Yes	35.0 (24.6, 46.9)	31.0 (23.8, 39.3)	32.6 (27.2, 38.6)	51.1	77.5	64.6
Frequency of visiting other community [b]	*N = 102*	*N = 142*	*N = 244*	*N = 47*	*N = 49*	*N = 96*
Never	55.9 (42.8, 68.2)	74.6 (63.5, 83.3)	66.8 (57.2, 75.2)	44.7	51.0	47.9
Less than once per month	17.6 (10.6, 27.9)	7.7 (4.2, 13.8)	11.9 (8.3, 16.7)	17.0	28.6	22.9
Once per month	9.8 (5.5, 16.8)	4.9 (2.2, 10.7)	6.9 (4.4, 10.7)	21.9	14.3	17.7
Many times per month	15.7 (8.7, 26.5)	12.7 (7.5, 20.5)	13.9 (9.0, 20.9)	17.0	6.1	11.5

[a] Prolonged absence is defined as absence from home for at least one continuous month in the past 12 months
[b] This refers to refugees visiting national areas and nationals visiting refugee areas

Figure A. Reason for prolonged absence from community

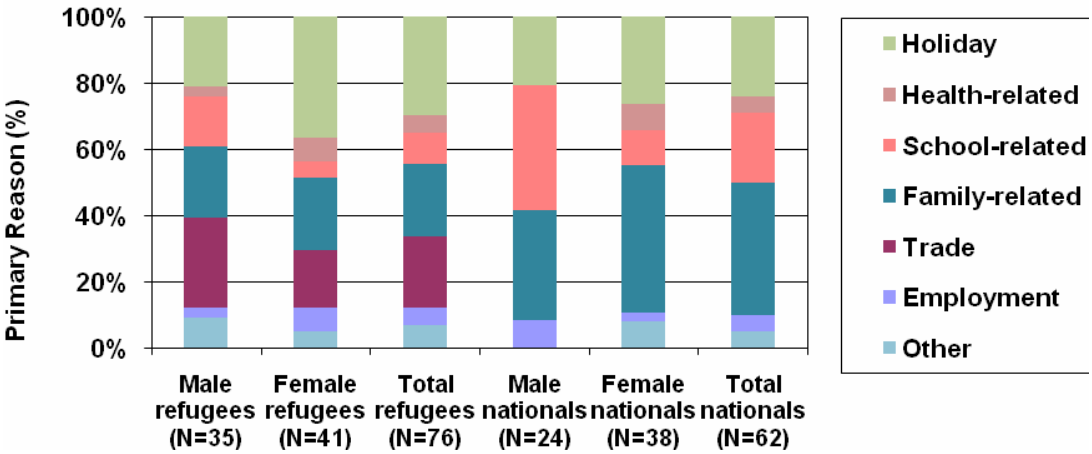


Table C. Alcohol and use

	Osire refugees			Surrounding nationals		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Alcohol consumption with last four weeks						
	N = 102	N = 141	N = 243	N = 47	N = 46	N = 93
Every day	2.0	.07	1.2	2.1	2.2	2.1
At least once a week	4.9	2.1	3.3	2.1	6.5	4.3
At least once a month	2.0	2.1	2.1	27.7	19.6	23.7
Never	85.3	93.6	90.1	68.1	71.7	69.9

Table D. Forced sex

	Osire refugees			Surrounding nationals		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Forced to have sex in past 12 mos						
15-24 years	*N = 24* 8.3 (2.1, 28.1)	*N = 44* 6.8 (1.7, 24.0)	*N = 68* 7.3 (2.1, 22.8)	*N = 12* 0	*N = 18* 11.1	*N = 30* 6.7
25-49 years	*N = 42* 0	*N = 66* 3.0 (.07, 11.4)	*N = 108* 1.8 (.04, 7.2)	*N =24* 0	*N =27* 0	*N = 51* 0
15-49 years	*N = 66* 3.0 (.071, 12.1)	*N = 111* 4.5 (1.7, 11.6)	*N = 177* 3.9 (1.5, 10.0)	*N = 36* 0	*N = 45* 4.4	*N = 81* 2.5

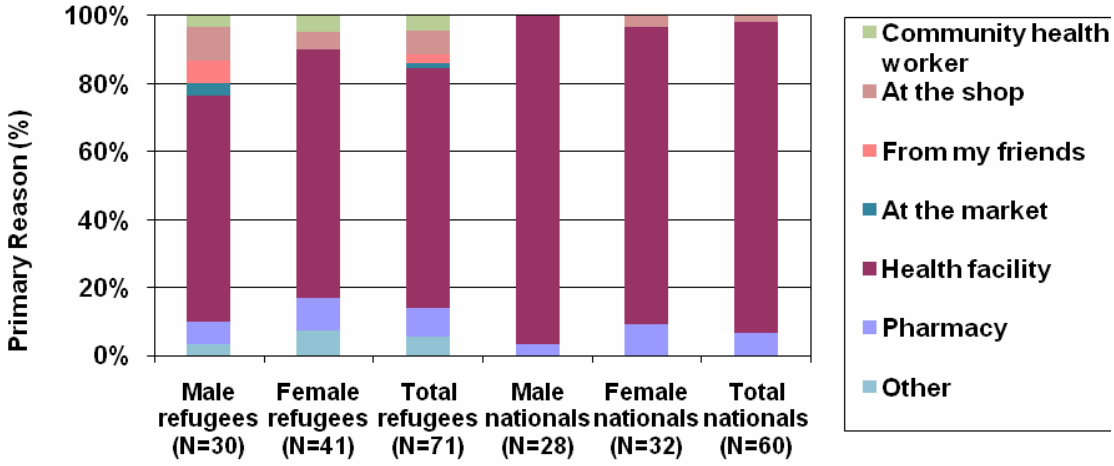
[a] Defined as having been forced to have sex again the respondent's will within the past 12 months. Denominator: those who have ever had sex.

Table E. Respondents who have heard of condoms, understanding of condom purpose, and ever used condoms by sex and by age group

	Osire refugees			Surrounding nationals		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Ever heard of condoms						
Yes	*N = 103* 88.3 (80.6, 93.2)	*N = 142* 90.1 (82.3, 94.7)	*N = 245* 89.4 (83.9, 93.1)	*N =47* 100.0	*N = 48* 91.7	*N = 95* 95.8
What are condoms used for?[a]						
Protect against STI/HIV/AIDS	*N = 91* 90.1 (82.8, 94.5)	*N = 127* 88.2 (80, 93.3)	*N = 218* 89.0 (84.2, 92.4)	*N = 47* 100	*N = 44* 91.0	*N = 91* 95.6
Prevent pregnancy	*N = 91* 35.2 (24.6, 47.5)	*N = 127* 52.8 (41.3, 63.9)	*N = 218* 45.4 (35.9, 55.2)	*N = 47* 0	*N = 44* 11.4	*N = 91* 5.5
Family planning	*N = 91* 19.8 (11.6, 31.7)	*N = 127* 22.8 (14.4, 34.2)	*N = 218* 21.6 (14.1, 31.4)	*N = 47* 0	*N = 44* 0	*N = 91* 0
Don't know	*N = 91* 4.4 (1.6, 11.4)	*N = 127* 3.9 (1.6, 9.1)	*N = 218* 4.1 (2.3, 7.2)	*N = 47* 0	*N = 44* 0	*N = 91* 0
Ever used a condom?[b]						
Yes	*N = 91* 37.7 (26.5, 49.6)	*N = 128* 35.2 (24.7, 47.2)	*N = 219* 36.0 (27.5, 45.7)	*N = 47* 59.6	*N = 44* 75.0	*N = 91* 67.0
Have ever used a condom, by age						
15-24 years	*N = 52* 38.5 (26.4, 52.1)	*N = 66* 40.9 (28.4, 54.7)	*N = 118* 39.8 (29.8, 50.8)	*N = 22* 50.0	*N =20* 80.0	*N = 42* 64.3
25-59 years	*N = 39* 35.9 (21.1, 53.9)	*N = 62* 29.0 (16.5, 45.9)	*N = 101* 31.7 (21.2, 44.4)	*N = 25* 68.0	*N = 24* 70.8	*N = 49* 69.4
Have ever used a condom, by education level						
	N = 91	*N = 128*	*N = 219*	*N = 47*	*N = 44*	*N = 91*
None	2.9 (.03, 20.8)	4.4 (1.1, 16.7)	3.8 (1.2, 11.7)	39.3	6.1	21.3
Some primary	2.9 (.03, 20.8)	6.7 (1.5, 24.7)	5.1 (1.0, 21.8)	14.3	18.2	16.4
Primary completed	11.8 (4.9, 25.5)	31.1 (19.8, 45.2)	22.8 (15.5, 32.2)	3.6	12.1	8.2
Secondary completed	73.5 (57.5, 85.1)	55.6 (38.9, 71.1)	63.3 (50.2, 74.7)	42.9	63.6	54.1
College	5.9 (1.4, 21.7)	---	2.5 (.06, 9.5)	---	---	---
University	---	2.2 (.03, 15.6)	1.3 (.01, 9.3)	---	---	---

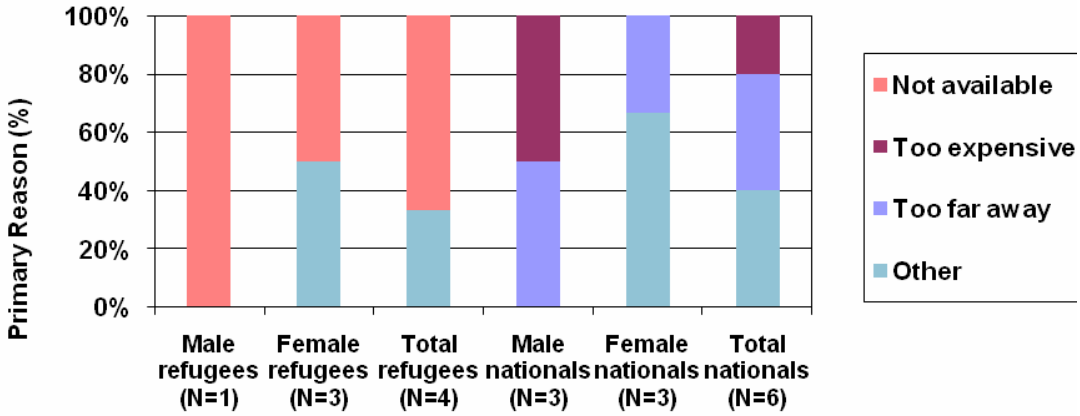
[a] Percentages across categories exceed 100 because response categories were not mutually exclusive.
[b] Denominator: those who have ever heard of condoms.

Figure B. Primary place where respondents seek condoms*



* Among those who know where to obtain condoms

Figure C. Primary constraint in obtaining condoms*



* Among those who cannot obtain a condom every time they need one.

Table F. Respondents who have had symptoms of sexually transmitted infections in the past 12 months, and treatment seeking

	Osire refugees			Surrounding nationals		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
Genital discharge	*N = 103*	*N = 142*	*N = 245*	*N =47*	*N = 49*	*N = 96*
Yes	3.9 (1.1, 12.5)	3.5 (1.5, 7.9)	3.7 (1.6, 8.0)	4.3	6.1	5.2
Genital ulcer/sore	*N = 103*	*N = 142*	*N =245*	*N =47*	*N = 49*	*N = 96*
Yes	3.9 (1.1, 12.6)	1.4 (.03, 5.5)	2.4 (.09, 6.7)	0	2.1	1.0
Seek treatment [a]	*N = 7*	*N = 5*	*N = 12*	*N =2*	*N = 3*	*N = 5*
Yes	57.1 (17.1, 89.6)	20.0 (1.3, 82.8)	41.7 (12.9, 77.6)	50.0	33.3	40.0

[a] Denominator: those who have had either genital discharge or genital ulcers or sores in the last 12 months.

Table G. Perceived personal risk of HIV infection

	Osire refugees			Surrounding nationals		
	Male %	**Female %**	**Total %**	**Male %**	**Female %**	**Total %**
What are the chances for you yourself to get HIV? [a]	*N = 96*	*N = 137*	*N = 233*	*N = 47*	*N = 49*	*N = 96*
Good chance	15.6 (8.9, 25.9)	13.1 (8.1, 20.6)	14.2 (9.8, 20.)	14.9	8.2	11.5
Moderate chance	14.6 (8.2, 24.6)	16.1 (10.2, 24.3)	15.4 (10.8, 21.7)	40.4	55.1	47.9
No chance	51.0 (41.2, 60.8)	61.3 (50.8, 70.9)	57.1 (50.0. 63.9)	36.2	28.6	32.3
Already infected	---	---	---	---	2.0	1.0
Don't know, no answer	18.7 (11.1, 29.8)	9.5 (5.2, 16.5)	13.3 (8.9, 19.5)	8.5	6.1	7.3

[a] Denominator: those who have heard of HIV

Table H. Antenatal care

	Female refugees	Surrounding nationals, females
Pregnant in last 5 years[a]	**%**	**%**
15-24 yrs	*N = 69* 37.7 (24.8, 52.6)	*N = 21* 47.6
25-49 yrs	*N = 71* 76.1 (64.1, 85.0)	*N = 25* 72.0
15-49 yrs	*N = 140* 57.1 (46.2, 67.4)	*N = 46* 60.9
If pregnant, received ANC at last pregnancy[b]		
15-24 yrs	*N = 26* 88.5 (73.7, 95.4)	*N = 10* *100*
25-59 yrs	*N = 54* 100.0	*N = 18* 94.4
15-59 yrs	*N = 80* 96.2 (89.7, 98.7)	*N = 28* 96.4

[a] Denominator: those who are female.

[b] Denominator: those who have been pregnant in the last 5 years.