

Knowledge, Sources of Information and Practice of Condom Use in the Prevention of Sexually Transmitted Infections (STIs) among Rural Dwellers in Delta State, Nigeria

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ABSTRACT This study investigated the relationship between knowledge, sources of information and practice of condom use in the prevention of Sexually Transmitted Infections (STIs) and differences between genders on their knowledge, sources of information and practice of condom use in the prevention of STIs among rural dwellers in Delta State. Two research questions and two hypotheses were used to test the data. Data were generated using a self-design closed ended questionnaire. The sample were 384 rural dwellers. The statistics were frequency count, percentages, means, standard deviation and a two-way ANOVA. The results reveal that rural dwellers in Delta State were inadequate in knowledge, sources of information and practice of STIs and condom use in the prevention of STIs. There was no difference between males and females on their knowledge, sources of information and practice of condom use in the prevention of STIs. However, there was significant relationship between knowledge, sources of information and practice of condom use in the prevention of STIs. Among the recommendations was the need to intensify campaign on STIs in the rural areas in Delta State using the most accepted traditional methods of information dissemination among others.

INTRODUCTION

Procreation is nature's gift of duplication and multiplication. Hence, sexual intercourse is a part and parcel of nature. But it is most unfortunate that man's source of reproduction has also become man's problem. Sexual intercourse has come to be associated with infections or communicable diseases referred to as sexual transmitted infections (STIs). Among these diseases are: Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS), Gonorrhoea, Syphilis and various trichomonas species.

In Nigeria, STIs have been in existence for a long time but it was only in 1984 that HIV/AIDS was discovered (Federal Ministry of Health (FMOH) 1992). Sexual interaction is a major means of transferring the STIs hence efforts are focused on how to reach out to sexually-active persons on information about STIs and their prevention strategies. According to Briggs (2004), "information should not be on their sexual transmission alone but also on issues of ethics, testing and counseling". Knowledge is assumed to be a construct property of man which controls attitude, behaviour and practice. Hence, most studies on STIs emphasize knowledge and education as prime factors in discussing STIs. Hence,

a lot of studies on STIs and HIV/AIDS were devoted to the issue of knowledge and education (Ewuzie 2002; Egenegbe and Nwachukwu 2007; Ogwu 2007) among others. One of the identified means of preventing of STIs is the use of condom. FMOH (2003) stated that "the strategies to prevent the further spread of HIV/AIDS in the country (Nigeria) have been getting persons who are involved in risky sex to use condom during such acts". Many authors have written on condom use, Bonker (1992), Ezedum (2002), Ezedum (2003), and Sunmola (2005) among others.

Sources of information are important issue in the acquisition of knowledge. Sources of information are important strategy in the control and prevention of STIs. It will enable health educators, researchers and stakeholders focus on the sources of information available to a particular community or environment. Such studies include that of Oladepo and Brieger (1994), Nwimo and Omaka (2007). The research setting was the rural areas in Delta State. The rural communities were so chosen because of the peculiarities of the rural areas where means of disseminating information may not be as strong as in the urban.

The study was motivated by the desire of the researcher to relate knowledge as an interven-

tion in the practice of condom use in the prevention of STIs and relate the same to source of information. By so doing it could be possible to make a categorical statement between knowledge and practice in condom use in the prevention of STIs. The focus was to assess rural dweller's knowledge of STIs, condom use, source of information on STIs and condom practice in the prevention of STIs.

Previous studies on STIs revealed various results. Uwakwe et al. (2001) revealed "that 78% of their sample were aware of gonorrhea and AIDs but majority were not aware of other STDs". Federal Ministry of Health (FMOH) (2003) stated in their survey "that government (72%) and health care workers (71%) were the main supporters of support for condom use though young people (60%) were also supportive. The survey stated further that religious leaders (33%) were less supportive, while urban dwellers and higher level of education were more supportive than rural dwellers and low level of education". In another study, Rwenge (2000) "found in their study that 97 percent of young people have heard of AIDs, about half had obtain information about AIDs from Radio (54%) about 50 percent from television and about 17 percent from friends or school, newspaper 14 percent, health centers' and family 9 percent each". Ibeagha and Ibeagha (2006) in their study reported that respondents had "significant knowledge about HIV/AIDS (70.3%) against 30 percent without knowledge, 66.9 percent showed care-free attitude towards AIDs as against 33.1 percent who did not". They also reported that 65.9 percent of their respondents use condom to prevent AIDs as against 34.1 percent. In another study, Nwimo and Omaka (2007) revealed that both boys and girls had knowledge of HIV/AIDS at boys 58.8 percent and girls 62.1 percent. The study also revealed that print media, radio, school (teacher), church, handbills and leaflets, family members, friends and peers group, HIV/AIDS campaigns, movies, cinema and film, doctors and nurses and television were all significant as source of information on HIV/AIDS, except banners and posters which were not significant.

In Africa, there exist various local and effective methods of disseminating information. Such methods include town criers, story-telling, women folk gatherings, traditional worshipping centers, and shrine gathering. No literature was available on the use of these methods. Hence,

the study was interested on how much such local and effective methods have been used in transmitting information on STIs and condom use.

The belief that practice will have reciprocal response on knowledge could be deduced from the stimulus-organism-response, theory of Hull (1955). In this study, knowledge is assumed to be the stimulus, organism is assumed to be rural dwellers while response corresponds with practice. The behavior theory could be summoned by this empirical formula $B = F(P + E)$ of Kurt Lewis as cited by Blass (1995). They also fit into the reciprocal of practice and knowledge concept; where B-Behavior is a function of (P) Practice and (E) Education.

This study would be significant to Health policy makers and implementers, health educators, health workers; (nurses and doctors) and all stakeholders in the health industry for planning, implementing, making comparative studies with other parts of the world and other research setting in finding solution to the pandemic diseases of STIs.

Research Questions

- 1 Are rural dwellers adequate in knowledge, practice and sources of information on STIs and condom use in the prevention of STIs in Delta State, Nigeria?
- 2 Is there gender difference in knowledge, practice and sources of information in the prevention of STI among rural dwellers in Delta State, Nigeria?

Research Hypotheses

- 1 There is no significant relationship between knowledge, practice and sources of information on STIs and condom use in the prevention of STIs among rural dwellers in Delta State, Nigeria.
- 2 There is no significant difference between gender in their knowledge, practice and sources of information on STIs and condom use in the prevention of STIs among rural dwellers in Delta State, Nigeria.

Study Area

Delta State is one of the 36 states that makes the Federal Republic of Nigeria. It has a population of about four million persons according

to the 1999 Federal office of statistics estimate. It is made up of 25 local government areas/councils.

MATERIAL AND METHODS

Study Design: The study adopted the ex-post-facto design of the descriptive research method.

Study Population: Delta State has a rural population of 2.3 million (as 2/3 of the state in rural while 1/3 is urban) (Nigeria Demographic Survey 2003). Delta State has 42% of the population as child dependency. This is excluded from the study as the study covers 15 years and above (sexual active persons). The study population was about 1.2 million persons.

Sample and Sampling Technique: Two-third of the local governments in the state were selected by random number making 15 local government areas. The sample size was 384 derived from the FAO, 95% level of alpha. The formula was:

$$N = \frac{Z^2Pq}{d^2}$$

where

n = The desired sample size (when population is greater than 10,000).

Z = The standard normal deviate, usually set at 1.96 (or more simply at 2.0), which corresponds to the 95 percent confidence level.

P = the proportion in the target population estimated to have a particular characteristics. If there is no reasonable estimate, then use 50% (i.e.; 0.50).

q = 1.0-p

d = degree of accuracy desired, usually set at 0.50 or occasionally at 0.20.

Three communities were ballot-sampled from each selected local government area. A total of 35 rural communities were selected. Nine persons were selected from each community by accidental sampling method, making a total of 405. Information is therefore elicited from the sample.

The instrument was a self-design close ended questionnaire with little adoption and modification from that of Nwimo and Omaka (1997) on HIV/AIDS. This questionnaire was made up of sections A to E. Section A consists of demographic information: sex, community, electricity etc. Section B was made up of knowledge assessment of STIs and condom use. It was closed-ended with four options. Section C was made of practice questions with option of Yes or No.

Section D was made up questions boarding of sources of information. Respondents were to tick the correct answers to them (adopted from Nwimo and Omaka (1997). Sections B-D were made up of 12 questions each. Section E was directed at traditional and effective method of community information dissemination. Respondents were to tick the correct answer to them.

The instrument was validated by professors of Health Education (2) Test and measurement (2) in Delta State University Abraka who found it worthy after minor corrections and suggestions.

The reliability of the instrument was tested using the test-retest method. Thirty persons outside the study area were used as respondents. The Pearson product moment coefficient was used to establish the reliability which stood at r = 0.75. This was accepted as adequate for the study. The instrument was administered by the researcher and research assistants. To achieve this, the questionnaire was given to any ten (10) persons met within the community on one man, one woman basis (accidental sampling), where the respondent had problems in term of understanding, the research assistant assisted either in language interpretation or meaning of each question item. The nine (9) best completed questionnaires were chosen. This enabled the researcher to achieve a 378 sample (98.8%) return rate. The questionnaires were analyzed using two-way analysis of variance at 0.05 level of significant. The SPSS version 10 was used for the analysis. In other to analyze section A, B and C, scores were categorized into the followings: scores 0 - 5 were to be seen as inadequate; 6-9 as adequate and 10-12 as very adequate.

RESULTS

Research Question I

From the table 1, it was observed that rural dwellers in this study were not adequate in knowledge and practice of condom use. A total of 371 (92.0%) in this study scored between 0-5 while 32 (7.9%) scored between 6-9 and two 0.49 percent scored between 10-12. With a grand total of 405 respondents, a mean of 1.160 and std. deviation of 0.367.

Table 2 has shown that 182 (44.9%) males and 190 (46.9%) female were in inadequate in knowledge in relating sources of information of

Table 1: Means, percentages and standard deviation of scores of knowledge as a function of practice on the prevention of STIs

Level of knowledge		Level of practice			%
		Inadequate	Adequate	Very adequate	
Inadequate Knowledge (0-5)	N	323	48	2	
	M	1.071	1.625	1.000	
	SD	.257	.489	.000	
Total	N		371		92.5
	M		1.142		
	SD		.349		
Adequate Knowledge (6-9)	N	16	14	-	
	M	1.117	1.666	-	
	SD	.332	.488	-	
Total	N		32		7.9
	M		1.37		
	SD		.491		
Very Adequate (Scores 10-12)	N	2	-	-	
	M	1.00	-	-	
	SD	.0000	-	-	
Grand Total	N		405		0.49
	M		1.160		
	SD		.367		

Key: N = Number
M = Means
SD = Standard deviation

condom use to knowledge. It was observed that 21 (5.18%) males 11(2.71%) were adequate.

Table 3 revealed that the relationship between sources of information as a function of practice was analyzed along gender line, it was observed that 182 (44.9%) males and 190 (46.9%) females were inadequate in practice while relating sources of information to practice in the prevention of

STIs and condom use. It was observed that 21(5.18%) males and 11(2.71%) females were adequate in practice.

From table 4 the following summarization can be upheld:

- (1) There was no significant relationship between sources of information and knowledge (f value = .551, significant, .458) (P<0.05).

Table 2: Mean, std deviation and percentage of scores, sources of information as function of knowledge on gender

Levels information scores	N	Gender (Knowledge)				Total	Total %
		Male	%	Female	%		
Poor Source of Information (Scores 0-5)	N	182		190			
	M	1.197		1.089			
	SD	.399		.286			
Total	N				372	91.85%	
	M				1.142		
	SD				.349		
Adequate Source of Information (Score 6-9)	N	21		11			
	M	1.428		1.2727			
	SD	.507		.467			
Total	N				32	7.9%	
	M				1.375		
	SD				.491		
Very Adequate Sources of Information (Scores 10-12)	N	-		-			
	M	-		-			
	SD	-		-			
Grand Total	N				405		
	M				1.160		
	SD				.367		

Table 3: Mean, std. deviation and percentages of source of information as a function of practice among gender group

Levels of information sources		Gender (practice)					
		M	%	F	%	Total	Total %
Poor Source of Information	N	182		190			
	M	1.148		1.131			
	SD	.356		.368			
Total	N					372	91.8
	M					1.139	
	SD					.362	
Adequate Sources of Information (Scores 6-9)	N	21		11			
	M	1.428		1.545			
	SD	.507					
Total	N					32	7.9
	M					1.177	
	SD					.382	
Very Adequate Source of Information	N	-		-			
	M	-		-			
	SD	-		-			
Total Grand Total	N					405	0
	M					1.165	
	SD					.385	

- (2) There was no significant relationship between sources of information and gender (f value = 1.203, significant, .273) (P 0.05)
- (3) There was significant relationship between knowledge and practice with a calculated f-value = 44.007 and significant at 0.000 (P<0.05). Although knowledge and practice had significant relationship, both were at inadequate level.
- (4) Source of information and practice when combined was not significant to neither knowledge nor gender (f value = .002, significant .968, and f value = .663, significant .416 respectively).

Table 5, has shown the various sources by which rural dwellers in this study acquired their knowledge and practice of STIs, when ranked, it took the following presentation; friends and

Table 4: Tests of between – subjects effect of knowledge, sources of information and practice of condom use in the prevention of STIs

Source	Dependent variable	Type III sum of squares	df	Mean square	F	Sig.
Corrected model	Knowledge score	16.858	4	4.214	44.703	.000
	Gender	2.124	4	.531	1.124	.345
Intercept	Knowledge score	40.771	1	40.771	432.465	.000
	Gender	60.414	1	60.414	127.895	.000
Source	Knowledge score	5.195E-02	1	5.195E-02	.551	.458
	Gender	.568	1	.568	1.203	.273
Practice	Knowledge score	8.298	2	4.149	44.007	.000
	Gender	.509	2	.254	.538	.584
Source *practice	Knowledge score	1.525E-04	1	1.525E-04	.002	.968
	Gender	.313	1	.313	.663	.416
Error	Knowledge score	37.710	400	9.428E-02		

a R Square = .309 (Adjusted R Square = .302)
 b R Square = .011 (Adjusted R Square = .001)

peers 292 (72%), television 276 (68%), radio 243 (60%), health worker 211 (52%) STIs campaign via HIV/AIDs 118 (29%), family members 61(15%) church pastors or revered 53 (13%) among other with less than 10% scores.

Table 5: Frequency count and percentages on sources of information on STIs and condom use in the prevention of STIs

S. No.	Item	Frequency count	%
1.	Radio	243	60%
	Print media books, newspapers and magazine etc		
2.	School teacher	20	5%
3.	Church pastors or revered	24	6%
4.	Handbills and leaflets	53	13%
5.	Banner and poster	8	2%
6.	Family member e.g. parents	8	2%
7.	Friends and peers	61	15%
8.	STIs campaign HIV/AID	292	72%
9.	Movie, cinema and film	118	29%
10.	Health worker,	32	8%
11.	H/E, Nurses and Doctors	211	52%
12.	Television	276	68%

DISCUSSION

Arising from the results of this study, the following observations were made. About 324 (80%) of the participants have either radio or television in their homes. From research question 1 and 2 on whether rural dwellers have adequate knowledge, practice and sources of information on STIs and condom use and if gender differences exist, it was revealed that 323 (86.3%) have neither adequate knowledge nor practice of STIs and condom use in the prevention of STIs; 49(13.1%) participants had adequate knowledge and practice and 2(0.5%) participants were very adequately knowledgeable. This was at variance to Uwakwe et al. (2001) whose finding “revealed that 78 percent of their sample were aware of gonorrhoea or HIV/AIDs but majority were not aware of other STIs”. It was also at variance with the findings of Ibeagha and Ibeagha (2006) “who stated that 70.3 percent had knowledge”. This study was also at vari-

ance with that of Nwimo and Omaka (2007) “who stated that their participants had more than 58% knowledge”. It can be assumed that the rural setting of this study might have accounted for the variations as most other referenced work were in either urban setting or learning institutions. On gender (Table 2), 182 (44.9%) males and 190 (46.9%) females were not knowledgeable, as against sources of information; while 21 (5.18%) males and 11 (2.71%) had adequate sources of information and knowledge. No one had very adequate knowledge. This finding was also at variance with the finding of Nwimo and Omaka (2007) where both males and females were knowledgeable. On gender practice (Table 3), 182 (44.9%) males and 190 (46.9%) females had both inadequate sources of information and inadequate practice of condom use in the prevention of STIs; 21(5.21% males and 11 (2.71%) females showed adequate practice and sources of information. None had very adequate sources of information and practice. This finding in this study tally and correlates the finding of Ibeagha and Ibeagha (2006) “who stated that 66.9 percent of the participants in their study had care-free attitude towards AIDS”.

On hypothesis one, which seeks to establish whether there is a significant relationship between knowledge and practice of STIs and condom use in the prevention of STIs, it was observed from the study that there was significant relationship between knowledge and practice, although participants in study were inadequate in knowledge and inadequate in practice of condom use toward the prevention of STIs. This finding collaborates the findings of Ibeagha and Ibeagha (2006) “who stated that participants in their study had care-free attitude towards AIDS”. Lawyin et al. (2000) had similar results. In their study, it was observed that men were aware of the risks they have taken but still do not use condom.

Hypothesis two stated that there is no significant difference between gender in their knowledge, practice and sources of information on STIs and condom use in the prevention of STIs. It was observed from Table 3 that neither males nor females had significant difference in knowledge, practice nor sources of information. This finding was similar to that of Adegboro and Adegboro (2007) who observed in their study that sex (males and females) had no significant difference in knowledge of HIV/AIDs. Ayankogbe et al.

(2003) also shows similar result in their study of HIV/AIDS.

On sources of information on STIs and condom use, the study observed that friends and peers, television, radio and health workers were the major sources. Poster, bill board, printed and newspaper were the least in the ranking. This finding is similar to that of the Nwimo and Omaka (2007) who observed similar pattern in their study.

CONCLUSION

Rural dwellers in Delta State, Nigeria were deficient in knowledge, practice and sources of information on condom use. Both males and females have no difference in knowledge, practice and sources of information on STIs and condom in the prevention of STIs. There was significant relationship between knowledge and practice, though both were inadequate among the rural dwellers. Radio, television, peer group and friends, health workers were the major sources of information on STIs and condom use. This study has shown that knowledge could be an intervention in finding solution to the problem of practice of condom use towards the prevention of STIs.

On traditional methods of disseminating information in rural areas, which included town criers, traditional shrines, women folk meetings and age-group and group peer meetings were not in use in the rural areas of this study.

RECOMMENDATIONS

Based on the findings of this study, these recommendations were made;

- (1) There is need to intensify campaigns on STIs in the rural areas of Nigeria using the most accepted traditional methods of information dissemination which include, town crier, peer group meetings, female gathering story telling among other methods.
- (2) Emphasis should be placed on radio, television and health workers among others. While health educators who are professional in health information dissemination and education should be employed in all health institutions.
- (3) There should be mainstreaming of campaign against STIs with no gender emphasis.
- (4) The emphasis on STIs campaigns should be

knowledge based hence school curriculum at all levels-ranging from primary school to contain programmes and course on STIs.

- (5) The National Youth Service orientation should have enough health educators to instruct on STIs emphasizing the link between knowledge and practice.
- (6) Government should organize periodical classes for church leaders as to enhance their knowledge on STIs for the purpose of disseminating same to their brethren.

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