

*Full Length Research Paper*

# The extent of knowledge about HIV/AIDS among young people in the Ejura-Sekyedumase district of Ghana

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Globally, young people are among the most vulnerable groups to HIV/AIDS, while adequate knowledge about the disease is key to their protection. This paper presents a mixed method analysis of knowledge about HIV/AIDS among young people in the Ejura-Sekyedumase district of Ghana. The study relies on questionnaire-based data from a random sample of 450 males and females of age 15 to 24, as well as qualitative data from focus group discussions and in-depth interviews. Data analyses employed frequencies, percentage distributions, content analysis and direct quotations as the main tools. Chi square test of independence was employed to find the association between background characteristics and knowledge about HIV/AIDS. The study showed that all the 450 respondents had heard of HIV/AIDS. The most important sources of information were radio (86%) and television (72.2%). The common sources of infection of HIV/AIDS as well as the means of prevention were also known. Misconceptions about the disease nevertheless existed. Nearly half (48.4%) believed that HIV/AIDS could be spread by mosquito bites, while 34% said the disease could be spread by spiritual means. Factors associated with knowledge of HIV/AIDS were education, place of residence, religion, ethnicity, and living arrangements. The findings call for increased access to formal education to defuse false perceptions and beliefs, the need for sustained HIV/AIDS education and communication, and HIV/AIDS education in health settings, among others.

**Key words:** HIV/AIDS, knowledge, young people, Ghana, Ejura-Sekyedumase district.

## INTRODUCTION

The deadly Acquired Immune Deficiency Syndrome (AIDS) pandemic is one of the most challenging health and development problems in the world. Sub-Saharan Africa alone, which is the worst affected region, is home to about two-thirds of the estimated 33.2 million people living with the disease worldwide (UNAIDS, 2007). Although Ghana's prevalence rates are not as high as in other African countries, the disease still poses a formidable challenge to the country's socioeconomic development. The prevalence rate in the country in 2010 was estimated at 1.5% (National AIDS/STI Control

Programme/Ghana Health Service, 2011). In Ghana, the predominant mode of HIV transmission is unprotected sex, accounting for 80 to 85% of transmissions. Mother-to-child transmission accounts for 12 to 15%, while transfusion of blood and blood products account for less than 2% (Ghana AIDS Commission, 2004; UNCEF, 2004).

Young people constitute one of the most vulnerable groups to HIV/AIDS. Globally, people of ages 15 to 24 years make up one-third of all those infected with the disease worldwide, as well as half of all new infections every year (UNAIDS, 2002, 2004; UNFPA, 2003). In the Ejura-Sekyedumase district where this study was carried out, statistics show a rising incidence of HIV/AIDS. At the Ejura Government Hospital, a total of 47 people tested

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positive for HIV/AIDS in 2004, 63 in 2005 and 104 in 2006 (Biostatistical Department, Ejura Government Hospital, Ejura-Sekyedumase District, 2007). At the Kasei Hospital, a private medical facility in the district, a total of 27 people tested positive for HIV/AIDS in 2002. This rose sharply to 56 in 2003, 74 in 2004, 83 in 2005 and 97 in 2006 (Records Department, St. Luke Hospital, Ejura-Sekyedumase District, 2005). Discussions with health officials, HIV/AIDS activists and community leaders in the district revealed that the actual situation could be much higher since a large part of the HIV/AIDS cases are not captured in official records. This is because many HIV/AIDS patients in the district seek treatment at prayer camps and other traditional healers instead of reporting to the hospitals. Also, many people prefer to keep the AIDS-related illness or death of family members secret to avoid stigmatisation by the community. Moreover, many people who might be infected do not know their HIV/AIDS status, since voluntary counselling and testing for HIV are not well-patronised in the district.

Addressing HIV/AIDS among young people is therefore a major focus of attention. The basic question that this research seeks to unravel is what is the knowledge about HIV/AIDS among persons of age 15 to 24 years in a fast growing district in Ghana where young people are at a high risk to HIV/AIDS because of the socio-cultural and economic environment? The study focuses on that age group as they are highly vulnerable to HIV/AIDS, with about 30% of the HIV prevalence in Ghana being found among them (Amoa, 2008).

## LITERATURE REVIEW: IMPORTANCE OF KNOWLEDGE IN PROTECTING AGAINST HIV/AIDS

The important role of knowledge in addressing the HIV/AIDS pandemic has been recognised. Knowledge about HIV/AIDS is considered an important step in behaviour change, while misconceptions can prevent individuals from making informed choices and taking appropriate action. A Joint United Nations Programme on AIDS (UNAIDS, 2005) report revealed that countries that had significantly reduced rates of new HIV/AIDS infections were those that typically invested heavily in AIDS education and awareness initiatives. Studies also show that young people who have been exposed to appropriate sex education tend to delay sex or use condoms (UNAIDS, 2003; UNFPA, 2003), contrary to the fear that sex education leads to greater sexual activity or experimentation.

In Nigeria, a study among unmarried male youths in the University of Ibadan (Adewole and Lawoyin, 2004) found that students who had obtained knowledge on HIV/AIDS early at the secondary school level were less likely to have multiple sexual partners, compared with those who acquired the knowledge later. In a Kenyan study, lack of factual knowledge on HIV/AIDS was among the factors found to be responsible for sexual intercourse among

adolescent girls (Lema, 1990).

Anarfi and Appiah (2004) emphasized that since there is yet no cure for HIV/AIDS, education then becomes the only social intervention against the disease. Other studies similarly report of positive influence of knowledge of HIV/AIDS on sexual behaviour, including delaying sexual intercourse, using condoms, and stopping sex with commercial sex workers (Bankole, 2004; Camlin and Chimbwete, 2003; Magnani et al., 2002).

## MATERIALS AND METHODS

The overall aim of the research is to find out the knowledge of HIV/AIDS among young people of age 15 to 24 years.

### Study area

The study was carried out in the Ejura-Sekyedumase district, located in the northern part of the Ashanti region of Ghana and covering a total area of 1,782 km<sup>2</sup> (Ministry of Local Government, Rural Development and Environment, 2006). The district capital is Ejura, which is about 98 km from Kumasi, the Ashanti regional capital. The study area has a total population of about 81,115, with an annual growth rate of 3.4%.

### Research design

The study is a descriptive, cross-sectional survey with a combined qualitative and quantitative approach.

### Variables

The key issues that were sought in the study were the socio-demographic characteristics of respondents, awareness and sources of information about HIV/AIDS, knowledge about the causes of HIV/AIDS and prevention of HIV/AIDS, and views on some common misconceptions about HIV/AIDS in Ghana.

### Sampling

The research covered a total of ten communities in the Ejura-Sekyedumase district. Out of these, Ejura was an urban area, while the rest, namely Babaso, Nokwareasa, Bissiw, Kyenkyenkura, Aberewano, Dijau, Frante, Kobiriti and Teacherkrom, were rural settlements. The communities were purposely selected from different parts of the district to ensure a fair coverage and enhance representativeness of the findings. A sample of 450 young people of age 15 to 24 years, from the ten communities, was used for the research. The respondents were selected randomly at the household level. In each housing unit, an unmarried person of age 15 to 24 was identified and interviewed. Where an identified person declined to participate, he or she was replaced by another from the same or the next house. This ensured that the sample size of 450 was fully met.

### Data collection

Data collection took place from February to May, 2008. Quantitative data was obtained through face-to-face interview using structured questionnaire. The questionnaires were first pretested on a sample of 20 respondents and all identified errors rectified. The individual

questionnaire captured data on the sociodemographic backgrounds of the respondents, awareness and sources of information about HIV/AIDS, knowledge of causes of HIV/AIDS, knowledge of HIV/AIDS prevention, and their opinions on some popular misconceptions about HIV/AIDS in Ghana. All responses to the knowledge questions were scored and summed up to generate the level of knowledge of each respondent. The total knowledge score ranged from 0 to 13. A score of 0 to 5 was defined as low knowledge; a score of 6 to 9 as moderate knowledge and a score of 10 to 13 as good knowledge of HIV/AIDS. The knowledge questions were derived from McIntyre (2004) who stated that all adolescents need information on how HIV spreads, how it can be prevented and how it is difficult to tell by physical appearance alone whether a person is infected or not. It also partly comes from Monasch and Mahly (2006) who also believe that an important, but not sufficient, foundation for any prevention effort aimed at young people is to provide them with basic information on how to protect themselves and their partners from acquiring the virus.

To probe and explore further the issues raised in the questionnaire, qualitative data through nine focus group discussions and three in-depth interviews were obtained. One focus group discussion was held with a cross-section of parents and opinion leaders at Ejura, and separate ones held with male and female participants of age 15 to 19 and 20 to 24; with four each at Ejura and Kyenkyenkura. The in-depth interviews were held with two HIV/AIDS activists and one health personnel from the district. Participation in the research was voluntary, and respondents were assured of strict confidentiality of their responses.

#### Data analysis

The quantitative data was analysed using the Statistical Package for the Social Sciences (SPSS) software (version 11). Frequencies and percentage distributions were used to summarise the data and to discover trends, magnitude and direction of the responses. Chi square test of independence was employed to find the association between background characteristics and level of knowledge about HIV/AIDS. The level of significance was set at  $P < 0.05$ . Qualitative data were analysed thematically by comparing the different responses in order to identify common trends, similarities and contrasts. They were used to validate the findings of the quantitative data.

## RESULTS

### Background characteristics of the respondents

Out of the 450 respondents interviewed, females were 51.3% while males made up 48.7%. The proportion of respondents of age 15 to 19 years was 52% while those of age 20 to 24 years was 48%. A little more than 51% were from rural areas while 49% were from Ejura, the urban area. More than 60% were Christian, while Moslems constituted 36.7%, and other groups 12%. All 450 respondents were unmarried. The majority of them (38.7%) had attained junior secondary school education, while about one-fifth had never had any formal education. Only about 33% said they were employed. A little more than one-third lived with their parents, nearly 11% lived alone, while the remaining were in other residential arrangements such as staying with other family members, friends, etc.

**Table 1.** Respondents' sources of information about HIV/AIDS

Source	Total (N=450)
Radio	387(86%)
Television	324(72%)
School	251(55.8%)
Friends	164(36.4%)
Community meetings/ campaigns	141(31.4%)
Family members	119(26.5%)
Health personnel/Hospital	136(30.2%)
Other	72(16%)

### Awareness and sources of information about HIV/AIDS

All the 450 respondents interviewed said they knew or had heard of the HIV/AIDS disease. Table 1 shows respondents' most common sources of information about HIV/AIDS. The responses are over 100% due to multiple responses. The most common source of information about HIV/AIDS revealed by the study was the radio (86%). This was followed by television (72.2%), school (55.8%), and friends (36.4%). Family members as a source of HIV/AIDS information was however very low (26%). Also comparatively low is health personnel as a source of HIV/AIDS information.

### Knowledge about ways of getting infected with HIV/AIDS

Respondents were asked to indicate ways in which they knew a person could be infected with HIV/AIDS. Sexual intercourse was the most commonly identified means (95%). This was followed by sharing razors, needles or other sharp items with an infected person (86%), and then blood transfusion (37.1%). The results of the focus group discussions also confirm these findings. This is because the predominant ways of HIV/AIDS mentioned during the interactions were sexual intercourse and to some extent the sharing of sharp items with an infected person. The results are summarised in Table 2.

### Knowledge about ways of preventing HIV/AIDS

Regarding the means by which a person could avoid HIV/AIDS, abstaining from sexual intercourse was the most commonly mentioned (78%). This was followed by not sharing sharp items with another person (65%). Using condoms was mentioned by more than half of the respondents (58%). Remaining faithful to one sexual partner was also quite prominent as it was mentioned by more than 40% of respondents (Table 3).

### Misconceptions about HIV/AIDS

To further explore the depth of knowledge about HIV/

**Table 2.** Ways in which a person can get HIV/AIDS.

Mode of HIV/AIDS transmission	Total (N = 450)
Sexual intercourse with an infected person	426 (94.7%)
Sharing razors, needles or other sharp items	387 (86.0%)
Blood transfusion	167 (37.1%)
From mother to child	95 (21.1%)
Other	96 (21.3%)
Don't know	10 (2.2%)

**Table 3.** Ways in which a person can avoid getting HIV/AIDS

Ways of avoiding HIV/AIDS	Total (N = 450)
Abstaining from sexual intercourse	351 (78.0%)
Not sharing blades, needles and other sharp items with an infected person	291 (64.7%)
Using condoms during sexual intercourse	263 (58.4%)
Remaining faithful to one sexual partner	183 (40.7%)
Other	66 (14.7%)
Don't know	10 (2.2%)

AIDS, respondents were asked to respond to five statements about HIV/AIDS. The results are shown in Table 4. The results show that majority of respondents (76.2%) knew that a person could look healthy and still be infected with the AIDS virus. Knowledge that HIV/AIDS is incurable was also high (88.2%). However nearly half of all respondents (48.4%) believed that HIV/AIDS could be transmitted by mosquito bites. Also, about one-third (34%) thought that the disease could be transmitted by witchcraft, juju or other supernatural means, while a little more than 16% also held that one could contract HIV/AIDS by eating from the same bowl with an infected person.

These perceptions were reflected in the focus group discussions. In relation to mosquitoes, one respondent said: "Yes, if I have AIDS and a mosquito bites me and it comes to bite you too, it can transmit the disease from me to you" (Male, 17, Kyenkyenkura). Another person added: "This is because I have learnt that AIDS is spread through contact with blood, and so since mosquitoes suck blood, they can suck one person's blood and transfer it to another person, thereby giving him the disease" (Female, 18, Ejura). At Kyenkyenkura, one person asked: "so if you say mosquitoes cannot transmit AIDS, how come they are able to transmit malaria?" (Male, 22).

On the issue of whether HIV/AIDS could be transmitted through supernatural means, a respondent said: "If there are witches in your family and they see that you are progressing in life, they can buy the disease for you spiritually" (Female, 19, Kyenkyenkura). Others asserted that someone who hates you can buy the disease for you spiritually or inject you with a spiritual needle, whether you are a relative or not. To them, that explains why some

people who might not be sexually promiscuous can still have AIDS.

### Levels of knowledge of HIV/AIDS

The scoring of the responses revealed that 33.6% of the respondents had good knowledge about HIV/AIDS, 52.2% had moderate knowledge while 14.2% had low knowledge of HIV/AIDS. Thus, the largest number of respondents had moderate knowledge about the disease. The differences in knowledge by background characteristics are shown in Table 5.

Chi square analysis shows no association between knowledge of HIV/AIDS and the sociodemographic variables of sex, age, and employment status, since the yielded P-values are greater than 0.05. The results however show that respondents in the urban area (Ejura) had higher knowledge of HIV/AIDS as compared to those in the rural communities. Only about 8% of those in the urban areas had low knowledge as compared to 20% for the rural areas. Meanwhile, 46.8% in the urban area had good knowledge about HIV/AIDS as compared to 20.9% in the rural areas. The higher knowledge in the urban area is confirmed by the high Chi square probability value of 0.000. The results also reveal a positive relationship between education and knowledge of HIV/AIDS. The level of knowledge of HIV/AIDS increases as education increases. Only 9.1% of respondents with no formal education had good knowledge about HIV/AIDS, while the figure for those with secondary education and above was 70.4%. In terms of living arrangements, it came out that respondents who lived alone had significantly higher

**Table 4.** Responses to statements about HIV/AIDS.

Statement	Response			Total
	True	False	Don't know	
A healthy looking could have the AIDS virus	76.2	18.2	5.6	100.0
HIV/AIDS can be spread by mosquito bites	48.4	51.6	10.0	100.0
HIV/AIDS can be spread by witchcraft, juju or other supernatural means	33.6	53.3	13.1	100.0
HIV/AIDS can be cured	7.6	88.2	4.2	100.0
One can be infected with HIV/AIDS by eating from the same bowl with an infected person	16.4	77.3	6.2	100.0

**Table 5.** Levels of knowledge of HIV/AIDS by selected sociodemographic factors.

Variable	Knowledge of HIV/AIDS			$\chi^2$	P-value
	Low	Moderate	Good		
<b>Sex</b>					
Male	14.2	50.2	35.6	0.866	0.649
Female	14.3	54.1	31.6		
<b>Age</b>					
15-19	16.2	53.0	30.8	2.578	0.276
20-24	12.0	51.4	36.6		
<b>Place of residence</b>					
Rural	20.0	59.1	20.9	37.905	0.000
Urban	8.2	45.0	46.8		
<b>Ethnicity</b>					
Akan	6.1	53.3	40.6	18.395	0.001
Northern	19.4	51.9	28.7		
Other	20.4	50.0	29.6		
<b>Religion</b>					
Christian	9.2	53.1	37.7	18.277	0.001
Moslem	21.8	49.7	31.1		
Traditional/other	25.0	66.7	8.3		
<b>Educational status</b>					
None	46.6	44.3	9.1	157.016	0.000
Primary	14.5	66.7	18.8		
J.S.S.	3.4	55.7	40.8		
Secondary and above	0.0	29.6	70.4		
<b>Employment status</b>					
Unemployed	12.0	55.3	32.7	5.005	0.082
Employed	18.7	46.0	35.3		
<b>Living arrangements</b>					
Alone	6.3	37.5	56.3	14.395	0.006
With parents	16.3	52.7	31.0		
Other	11.8	57.8	30.4		

knowledge of HIV/AIDS as compared to those living with parents. In terms of ethnicity and religion, Akans and Christians demonstrate higher knowledge of HIV/AIDS as compared to the other groups.

## DISCUSSION

This research examined the knowledge of young people of age 15 to 24 years about HIV/AIDS. All the 450 respondents indicated that they were aware of HIV/AIDS. This corroborates the observation in the 2003 Ghana Demographic and Health Survey (GDHS) that awareness of HIV/AIDS in Ghana is almost universal. Indeed, awareness of HIV/AIDS in this research was 100% for both men and women as compared to 98% among women and 99% among men in the 2003 GDHS (GSS and ORC Macro, 2004).

The electronic media (radio and television) emerged as the predominant source of information about HIV/AIDS among the respondents. This is similar to the finding by Bohmer and Kirumira (2000) among Ugandan students. The finding that the youth in the study area obtained information about HIV/AIDS more from friends than from family members could be an indication of low level of communication with family members concerning sexual matters. It also confirms the findings by Wodi (2005), Ruby (2004) and Senderowitz (1998). The low level of HIV/AIDS information from health personnel however call for more education on HIV/AIDS at health centres in the district.

Majority of the respondents in the survey were able to identify the major routes of HIV/AIDS transmission. The ways of prevention were also well known. However, an intriguing finding is that nearly half of all respondents (48.4%) believed that HIV/AIDS could be transmitted by mosquito bites. About one-third (34%) also thought that the disease could be transmitted by witchcraft, juju or other supernatural means. These perceptions were higher among rural and less educated respondents. These results generally compare with Anarfi and Antwi (1995) as well as Bannerman, Hammah and Adom (2004).

No efforts must be spared to explain that mosquitoes cannot transmit HIV/AIDS. People need to understand that mosquitoes, when they bite, do not transmit blood from one person to another; the necessary condition for them to be able to transmit HIV/AIDS. Rather, they may pick the malaria parasite, which after going through various cycles of development, may then be transmitted to another person upon being bitten, thereby causing malaria. On whole, these wrong perceptions must be addressed as they could induce a defeatist attitude towards the disease; hence, inhibit behavioural change (Wodi, 2005).

This research established a significant relationship between place of residence and knowledge of HIV/AIDS, with respondents in the urban areas having better know-

ledge of HIV/AIDS as compared to those in the rural areas. The rural disadvantage in knowledge of HIV/AIDS also confirms the observation by UNAIDS (2005).

For policy and programmes interventions, there would be the need to increase access to formal education in the study area as a means of improving knowledge about HIV/AIDS. HIV/AIDS education in the study area must focus on misconceptions such as the belief in witchcraft and mosquitoes as causes of the disease. It must also tackle non-sexual issues such as mother-to-child transmission and transmission through blood transfusion. Awareness must also concentrate on those living in rural areas, those with low education, those who stay with their parents, people of northern Ghana ethnic groups as well as non-Christians. Health personnel must also interact with young people to educate them about the disease. Family, parents and other family members must be encouraged to discuss sexual and HIV/AIDS issues with their children.

## Conclusion

This study has revealed that the awareness about HIV/AIDS in Ghana and among young people is very widespread. However, alongside correct knowledge, there also existed a lot of misconceptions and misinformation about the disease. There is the likelihood that young people might act on this false information to engage in acts that might expose them to the risk of the infection. Therefore, pragmatic programmes in the form of comprehensive HIV/AIDS education must be put in place to adequately protect the youth in the study area from HIV/AIDS.

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