GHANAIAN YOUTH ATTITUDES TOWARDS HIV/AIDS: THE ROLE OF HIV/AIDS BEHAVIOUR CHANGE COMMUNICATION MESSAGES

Abstract

This study examined the relationship between exposure to HIV/AIDS Behaviour Change Communication (BCC) messages and attitudes towards HIV/AIDS among Ghanaian youth using data from the 2003 Ghana Demographic and Health Survey. Awareness of AIDS was almost universal; however, awareness of HIV/AIDS messages was not as high as awareness of AIDS. Among those who had heard or seen all three messages (39.3% among females and 41.4% among males) only 17.0% of females and 20.7% of males had favourable attitudes. A multiple linear regression analysis revealed that hearing or seeing two or all the three messages was significantly associated with attitudes. Religious spaces also play a key role in shaping attitudes. However, high awareness of AIDS and HIV/AIDS messages did not translate into more favourable attitudes. New messages and existing BCC messages should be critically evaluated to ensure success especially among the youth.

Key words: Attitudes, Behaviour change communication, Ghana, HIV/AIDS, Youth

Introduction

HIV/AIDS poses a major challenge to the health and socio-economic development of many countries in the world (United Nations, 2004 & Rice & Farquhar, 2000). Globally, some 5.4 million young people live with HIV and AIDS today and 40% of all new infections occur among this group, due to their physical, social, psychological and economic vulnerabilities (Wangulu, 2008). The African continent is the hardest hit by the HIVAIDS epidemic and the youth constitute a high risk group in many African countries. Ghana has a low HIV prevalence rate compared to other African countries. However, HIV prevalence among the youth, aged 15-24, is high. HIV prevalence among this group, which is used as the marker for new infections was 2.5% in 2004, 1.9% in 2005, 2.5% in 2006, 2.6% in 2007, 1.9% in 2008 and 2.1% in 2009 (National AIDS Control Program, Ghana AIDS Commission & Ghana Health Service, 2010). Often, young people may not perceive themselves to be at risk or may lack access to adequate HIV/AIDS information or services; this increases their risk status.

The welfare of young people, who represent an important component of the current trends in the HIV/AIDS pandemic, have become the major focus for governments, policymakers and service providers (Wangulu, 2008). In Ghana, the 2004 national HIV/AIDS and STI policy addressed issues like stigmatization, discrimination, and positive behaviour change. One of the major objectives of the policy was to ensure that adequate attention is paid to vulnerable groups such as the youth (Amoah, 2005).

In the absence of accessible and affordable treatment for HIV/AIDS and an effective vaccine to prevent HIV infection (Tayler, 2004), HIV/AIDS education becomes very critical in the fight against the pandemic. In Ghana, the initial set of Information, Education and Communication (IEC) programmes on health promotion was in the form of general education through the mass media. Messages focused on the aetiology and mode of transmission of HIV/AIDS (Awusabo-Asare, 1995). There was a subsequent move towards the use of Behaviour Change Communication (BCC) programmes.

BCC is an interactive community-centred process which involves the development of tailored messages and approaches using a variety of communication channels (Family Health International & USAID, 2002; Awusabo-Asare, 1995). The messages use a blend of communication approaches and tools with the aim of empowering communities with skills and capabilities to enable them promote and manage their own health and development. It also aims to foster positive change in knowledge, attitudes and behaviour (Wangulu, 2008). HIV prevention interventions and campaigns have been grounded in psychological theories and models of health behaviour including the health belief model, the theory of reasoned action, the AIDS risk reduction model and theories of social learning prevention (Riley & Baa-Odoom, 2010; Campbell, 2003; Joffe, 1996; Joffe, 1995; Anarfi & Antwi, 1993; Ametewe, 1992). Collectively these approaches have informed the knowledge-attitude behaviour (KAB) model of health promotion, which has been applied in many African countries particularly within the context of HIV/AIDS (Riley & Baah-Odoom, 2010; Joffe, 1996; Joffe, 1995).

Research shows that societal response or attitudinal change towards HIV/AIDS is an essential precondition for HIV-related behaviour change (Johns Hopkins University, 2003). However, the core assumption of the KAB model that there is a linear relationship between knowledge, attitudes and behaviour has been criticized. Critics observe that the relationship between knowledge, attitudes and behaviour is complex and unpredictable. Research that focuses on community-level analysis shows that the social environment plays a complex role in socio-cognitive processes such as the legitimation of social and expert knowledge, the emotional power of social and intimate relationships, and the normalization of healthy and unhealthy behaviours (Campbell, 2003; Crossley, 2000; Joffe, 1996; Joffe, 1995).

The first national communication program on HIV and AIDS in Ghana was launched in February 2000, titled Stop AIDS Love Life (Johns Hopkins University, 2003). The initial phase of the Stop AIDS Love Life campaign (“Shattering the Silence”) occurred between 2000 and 2001, and emphasized HIV-protective behaviours. During this period the award winning radio show, ‘Speakeasy’ was aired. This led to the development of the

popular television program ‘Things We Do for Love’ which was a serial drama for the youth on reproductive health issues. Subsequent phases have placed greater emphasis on community compassion and social care for those living with HIV/AIDS. This involved traditional chiefs and queen mothers in the second phase (‘Community Mobilization and Life Skills Series’ 2001-2002) and religious leaders in the third phase (‘Reach Out, Show Compassion’ from 2002-2003) because of the powerful roles played by traditional rulers and religious leaders in Ghanaian social life (Johns Hopkins University, 2003).

Despite various interventions put in place to educate, change and maintain positive attitudes towards HIV/AIDS, experts note that there are gaps between knowledge, attitude and practice (Alebachew, 2006). This has created great concern to both policy makers and practitioners. To date, there has been no systematic analysis of why gaps exist between existing HIV/AIDS Behaviour Change Communication messages and population attitudes towards HIV/AIDS. This paper seeks to examine the relationship between HIV/AIDS BCC messages and the youths’ attitudes towards HIV/AIDS in Ghana.

Method

Source of data

This study used data from the 2003 Ghana Demographic and Health Survey (GDHS), a nationally representative sample survey that has been conducted every five years since 1988. The GDHS is conducted to provide government, health policymakers, researchers and relevant organisations with empirical information on a variety of issues including sexually transmitted infections like HIV. The 2003 GDHS interviewed 2 160 females and 1 791 males aged 15-24 years and collected data on exposure to HIV/AIDS BCC messages aired prior to the survey: ‘Stop AIDS, love life’, the TV show ‘Things we do for love’ and ‘Reach out, show compassion’. The 2003 GDHS also collected data on attitudes towards people living with HIV/AIDS. The questions relating to attitudes were whether respondents: (1) are willing to care for a family member with HIV at home (2) would buy fresh vegetables from a vendor who has the AIDS virus; (3) believed that a

female teacher who had the AIDS virus should be allowed to continue teaching; and (4) would want to keep the HIV-positive status of a family member a secret.

Methods of data analysis

The study employed descriptive statistics, using frequencies and cross tabulations (significance of the associations were tested using the Pearson Chi-square test at alpha level = 0.05) to examine the socio-demographic characteristics and the relationships between the background variables and awareness of AIDS and HIV/AIDS messages as well as attitudes towards HIV/AIDS. Multiple linear regression was also employed to determine the effects of the predictor variables on youth attitudes.

Variables

Independent variables

The independent variables used in this paper are: age, place of residence, region of residence, highest level of education, ethnicity, religion, marital status, knowledge of HIV prevention, number of sources of HIV/AIDS messages, HIV/AIDS messages and household wealth. The wealth index of the household to which the young people belonged was used as a proxy to measure their socio-economic status.

Knowledge of HIV prevention

Knowledge of HIV prevention was computed from responses to three questions: Reduce chances of AIDS by: (1) always using condoms, (2) limiting sex to one uninfected partner and (3) abstaining from sex. For each item, two responses were possible; yes or no (these were re-coded into ‘yes’ as one and ‘no’ as zero). The minimum obtainable score was zero which represented no knowledge of HIV prevention and the maximum score obtainable was three which represented comprehensive knowledge for HIV prevention.

Exposure to HIV/AIDS BCC messages

Exposure to HIV/AIDS messages was computed using responses to three questions: whether respondents had ever heard or seen these slogans: (1) ‘Stop AIDS, love life’,

(2) the TV show ‘Things we do for love’ and (3) ‘Reach out, show compassion’) which assessed exposure to HIV/AIDS BCC messages. Exposure to HIV/AIDS messages was computed in the same way as knowledge of HIV prevention. All the respondents who were asked about whether they had heard about HIV/AIDS messages were also asked about the three slogans mentioned above. It is worth noting that these slogans were not mutually exclusive.

Dependent variable

Attitude Score

An attitude score was computed by awarding one mark for each correct answer to four statements that asked the respondent’s willingness to: (1) buy vegetables from a vendor with the AIDS virus, (2) take care of a relative with the AIDS virus, (3) allow someone with AIDS virus to continue teaching and (4) believe that the HIV-positive status of a family member does not need to remain a secret. These scores assessed respondent’s attitudes towards people living with the AIDS virus in other words attitudes towards HIV/AIDS. For each item, two responses were possible; yes or no (these were re-coded into ‘yes’ as one and ‘no’ as zero). The minimum obtainable score was zero (unfavourable attitudes) and the maximum score obtainable was four (favourable attitudes). The scores obtained ranged from zero to four. The Statistical Package for the Social Sciences (SPSS) was used to analyse the data.

Results

Background characteristics

In all 2 160 females and 1 791 males aged 15-24 years were interviewed nationwide. Most (females, 53.1% and males, 61.8%) were teenagers (15-19). A reasonable proportion of the respondents had no education (15.7% of females and about nine per cent of the males). From Table 1 there are slightly more females in urban areas than in rural areas and the vice versa for males (53.7% of females and 48.0% of males were in urban areas) and majority of both sexes had never married (65.6% of females and 90.2% of males). About a third (30.9%) of females and close to one in ten (7.5%) males were currently married/living together with their partners.

Table 1: Demographic characteristics of respondents by sex

	Female	Male
Demographics characteristics	N (%)	N (%)
Age		
15-19	1148 (53.1)	1107 (61.8)
20-24	1012 (46.9)	684 (38.2)
Region		
Western	214 (9.9)	172 (9.6)
Central	177 (8.2)	140 (7.8)
Greater Accra	382 (17.7)	229 (12.8)
Volta	180 (8.3)	173 (9.7)
Eastern	218 (10.1)	179 (10)
Ashanti	455 (21.1)	346 (19.3)
Brong Ahafo	225 (10.4)	210 (11.7)
Northern	150 (6.9)	159 (8.9)
Upper West	52 (2.4)	50 (2.8)
Upper East	107 (5.0)	133 (7.4)
Type of place of residence		
Urban	1160 (53.7)	859 (48.0)
Rural	1000 (46.3)	932 (52.0)
Highest level of education		
No education	339 (15.7)	164 (9.2)
Primary	473 (21.9)	401 (22.4)
Middle/JSS	1013 (46.9)	849 (47.4)
Secondary+	335 (15.5)	377 (21.1)
Religion		
No religion	59 (2.7)	77 (4.3)
Roman Catholic	336 (15.5)	258 (14.4)
Other Christian	1417 (65.6)	1072 (59.9)
Moslem	321 (14.9)	325 (18.1)
Other religions	27 (1.3)	59 (3.3)
Current marital status		
Never Married(R)	1417 (65.6)	1615 (90.2)
Married/Liv.Tog.	667 (30.9)	135 (7.5)
Formerly Married	76 (3.5)	41 (2.3)
Total	2160 (100.0)	1791 (100.0)

Computed from GDHS, 2003 dataset

Awareness of AIDS

Awareness of AIDS was almost universal among the youth. About 98% and 99% of young females and males respectively, had heard of AIDS. There was however variation in awareness of AIDS among both females and males across the selected background characteristics with females in the Northern region recording the lowest (87.6%). Among

the males, respondents belonging to other religions (predominantly Traditionalist/Spiritualist) had the least level of awareness (93.2%) compared with the various religious groups.

Knowledge of HIV prevention methods

Knowledge of the various methods of HIV prevention was generally high among males. From Table 2, about eight in ten (77.9%) of females and males (81.7%) aged 15-24 years knew they could reduce their risk of getting the AIDS virus by using condoms. Nearly nine in ten (87.9%) of females and males (88.6%) believed they could reduce the risk of getting the AIDS virus by limiting sex to one uninfected partner and about 81% of females and 83% of males reported that abstaining from sex could reduce their chance of getting the AIDS virus. In all, about two thirds (65.3%) of females and males (68.2%) had comprehensive knowledge of HIV prevention that is they know that one can reduce chances of getting the AIDS virus by: always using condoms, limiting sex to one uninfected partner and abstaining from sex.

Table 2: Knowledge of HIV prevention by sex

	Female		Male	
Knowledge of HIV prevention	%	Total	%	Total
Using Condoms	77.9	2125	81.7	1767
Limiting sex to one uninfected partner	87.9	2125	88.6	1767
Abstaining from sex	80.5	2125	83.0	1767
Knowledge scores	%	Number	%	Number
0	5.3	112	3.7	65
1	8.4	179	7.5	132
2	21.0	447	20.7	365
3	65.3	1387	68.2	1205
Total	100.0	2125	100.0	1767

Computed from GDHS, 2003 dataset

Awareness of HIV/AIDS messages

Awareness of HIV/AIDS messages was high, it was however relatively lower than awareness of AIDS. About 93% of females and 94% of males had heard or seen at least one message on HIV/AIDS (Table 3). There was variation in awareness of HIV/AIDS messages among both females (70.4% to 100%) and males (78.6% to 100%) by background characteristics. Among both sexes, awareness was higher among respondents aged 20-24 (females, 93.5% and males, 95.9%) than those aged 15-19 (females, 92.8% and males, 93.5%). Awareness was higher among both sexes in urban areas (females, 97.8% and males, 98.8%) than among those in rural areas (female, 87.6% and male, 90.3%). Male respondents' belonging to traditionalist/spiritualist religions had the least awareness level (93.2%) among the various religious denominations. Awareness of HIV/AIDS among both sexes increased with increasing level of education. A similar pattern was observed with wealth status which also increased with increasing wealth status among both sexes.

Table 3: Background characteristics and awareness of HIV/AIDS messages by sex

	Female			Male		
Background characteristics	Yes	No	Total	Yes	No	Total
Age						
15-19	92.8	7.2	1127	93.5	6.5	1086
20-24	93.5	6.5	998	95.9	4.1	681
Region						
Western	93.5	6.5	214	95.3	4.7	169
Central	92.0	8.0	176	95.7	4.3	138
Greater Accra	97.6	2.4	380	95.7	4.3	230
Volta	78.8	21.2	179	94.8	5.2	173
Eastern	98.6	1.4	215	97.7	2.3	175
Ashanti	98.2	1.8	454	98.6	1.4	347
Brong Ahafo	95.1	4.9	224	95.7	4.3	209
Northern	71.5	28.5	130	79.7	20.3	148
Upper East	97.1	2.9	104	93.8	6.2	130
Upper West	81.6	18.4	49	79.2	20.8	48
Place of residence						
Urban	97.8	2.2	1156	98.8	1.2	853
Rural	87.6	12.4	969	90.3	9.7	914
Education						
No education	81.0	19.0	315	78.6	21.4	159
Primary	89.5	10.5	465	88.9	11.1	389
Middle/JHS	96.6	3.4	1010	97.6	2.4	842
Secondary+	99.1	0.6	335	99.5	0.5	377
Religion						
No religion	70.4	29.6	54	86.8	13.2	76
Roman Catholic	93.1	6.9	332	93.7	6.3	255
Other Christian	94.5	5.5	1409	96.2	3.8	1068
Moslem	91.8	8.2	305	92.4	7.6	314
Other religions	80.0	20.0	25	85.2	14.8	54
Marital status						
Never married	94.6	5.4	1400	94.3	5.7	1591
Currently in union	89.9	10.1	651	94.8	5.2	134
Formerly married	94.6	5.4	74	97.6	2.4	42
Ethnicity						
Akan	96.7	3.3	1130	96.7	3.3	871
Ga-Dangme	97	3.0	166	92.7	7.3	109
Ewe	88.3	11.7	273	95.2	4.8	226
Mole-Dagbani	84.8	15.2	237	87.8	12.2	294
Other	88.4	11.3	320	94.4	5.6	266
Wealth status						
Poorest	81.2	18.8	282	84.1	15.9	290
Poor	86.6	13.4	322	92.0	8.0	311
Middle	93.8	6.2	406	95.6	4.4	365
Rich	96.3	3.7	516	97.5	2.5	404
Richest	98.7	1.3	601	99.5	0.5	397
Total (15-24)	93.1	6.9	2125	94.4	5.6	1767

Computed from GDHS, 2003 dataset

Sources of HIV/AIDS messages

Table 4 shows the sources of HIV/AIDS messages. Ghanaian youth had a variety of information sources and most of them got information from the mass media including radio (female 91.3% and males 95.1%) and television (females 85.5% males 85.8%). Other sources of information included branded clothing such as tee shirts or caps (female 78.9 % and males 83.3%). The least mentioned source of information by both females and males was brochures (females 43.0% and males 38.9%). Approximately 14% of females and 14% of males recalled hearing HIV/AIDS messages from 11 communication sources.

Table 4: Sources of HIV/AIDS messages by sex

	Female		Male	
Source	Frequency	%	Frequency	%
TV	1408/1647	85.5	1342/1564	85.8
Music video	1058/1647	64.2	900/1564	57.5
Radio	1504/1647	91.3	1487/1564	95.1
Newspaper	660/1647	40.1	687/1564	43.9
Poster	1259/1647	76.5	1217/1564	77.8
Car sticker	1107/1647	67.2	1151/1564	73.6
Brochures	708/1647	43.0	608/1564	38.9
Tee shirt or cap	1300/1647	78.9	1302/1564	83.3
Mobile ISD van	917/1647	55.7	750/1564	48.0
During community event	855/1647	51.9	739/1564	47.2
Road show	819/1647	49.7	735/1564	47.0

Computed from GDHS, 2003 dataset (Multiple response tabulated at yes =1)

Exposure to HIV/AIDS messages

Exposure to HIV/AIDS messages was generally higher among males as shown in Table 5. About eight in ten (76.3%) females and close to nine in ten (87.7%) males had seen or heard the slogan ‘stop AIDS love life’. A little more than half (51.7%) of females and males (56.3%) had heard or seen the slogan ‘reach out, show compassion’ while about

55% of females and 60% of males had seen the TV show 'Things we do for love'. Aside the target messages 17.2% of females and 6.5% of males had heard or seen other HIV/AIDS messages. Generally two out of five (39%) females and males (41%) had heard or seen all three target messages.

Table 5: Percentage of respondents by HIV/AIDS messages and Exposure to HIV/AIDS messages by sex

HIV/AIDS Messages	Female		Male	
	%	Total	%	Total
'Reach out, show compassion'	51.7	2125	56.3	1767
'Stop aids, love life'	76.3	2125	87.7	1767
TV show 'Things we do for love'	54.5	2125	60.2	1767
HIV/AIDS Messages	Frequency	%	Frequency	%
Heard none	113	5.3	76	4.3
Heard other messages	365	17.2	115	6.5
Heard one	250	11.7	268	15.2
Heard two	562	26.4	577	32.7
Heard three	835	39.3	731	41.4
Total	2125	100.0	1767	100.0

Computed from GDHS, 2003 dataset

Attitudes towards people living with HIV/AIDS

About 71% of females and 72% of males indicated their willingness to care for a family member with HIV at home, while 30% and 37% of females and males, respectively, would buy fresh vegetables from a vendor with AIDS. Four in ten (44.0 %) and five in ten (50%) of females and males, respectively, believed HIV positive female teachers should be allowed to continue teaching and about half (54.3%) of females and close to two thirds (60.5%) of males believed that the HIV positive status of a family member does not need to remain a secret (Table 6). In all, less than a tenth (9.6%) of females and a little above one tenth (13.6%) of males expressed favourable attitudes on all four measures.

Table 6: Percentage of respondents by various attitudes towards HIV/AIDS and attitudes scores by sex

Attitudes towards HIV/AIDS	Female		Male	
	%	Total	%	Total
Willing to care for relative with AIDS	71.3	2125	71.9	1767
Would buy vegetables from vendor with AIDS	30.0	2125	37.1	1767
Person with AIDS allowed to continue teaching	44.0	2125	49.5	1767
Not allowed to keep AIDS infection secret	54.3	2125	60.5	1767
Attitude scores	Frequency	%	Frequency	%
0	137	6.5	94	5.3
1	635	29.9	417	23.6
2	653	30.8	555	31.4
3	496	23.3	461	26.1
4	203	9.6	240	13.6
Total	2125	100.0	1767	100.0

Computed from GDHS, 2003 dataset

Exposure to HIV/AIDS messages and attitudes

From Table 7, the proportion of the youth with favourable attitudes increased with increasing number of messages heard. Seventeen per cent of females and about 21% of males who had heard or seen all the three messages had favourable attitudes. About eight per cent of females and 11% of males who had heard or seen two of the messages had more favourable attitudes. Of those who had heard or seen none of the messages, zero per cent (0%) of females and just about one per cent (1.3%) of the males had more favourable attitudes. Of those who had heard or seen other messages, close to three per cent (2.5%) of females and about four per cent (4.3%) of males had more favourable attitudes.

Table 7: Exposure to HIV/AIDS messages by attitude score and sex

HIV/AIDS	Female						Male					
Messages	0	1	2	3	4	Total	0	1	2	3	4	Total
Heard none	12.5	43.8	31.3	12.5	0.0	112	17.3	40.0	30.7	10.7	1.3	76
Heard oth. Mes.	10.1	50.4	25.5	11.5	2.5	365	7.8	40.9	29.6	17.4	4.3	115
Heard one	10.0	36.8	37.6	13.2	2.4	250	4.5	29.7	36.5	21.8	7.5	267
Heard two	7.5	25.1	33.8	25.4	8.2	562	5.4	28.6	31.2	23.9	10.9	577
Heard three	2.3	20.3	28.8	31.6	17.0	836	3.7	13.1	30.2	32.3	20.7	732
Total	6.4	29.9	30.7	23.3	9.6	2125	5.2	23.6	31.5	26.1	13.6	1764

Pearson Chi-Square Value = Female, 301.339 and Male, 172.3929.

Significant at α level=0.01

Computed from GDHS, 2003 dataset

Determinants of attitudes towards HIV/AIDS among the youth

Using the enter method a significant model emerged for both female ($F_{34, 2090} = 13.067$, $p < 0.01$) and males ($F_{34, 1732} = 11.785$, $p < 0.01$). About 16% and 17% (adjusted R squared, female = 0.162, male = 0.172) of the variation in the response variable was explained by the predictor variables in the model among females and males respectively.

Table 8 shows that age of respondents was not significantly related to attitudes among both sexes. The results indicate that, females and males aged 20-24 had more favourable attitudes (females 0.072 and males 0.022 respectively) than respondents aged 15-19. Where the youth resided (rural or urban) was not significantly related to attitudes towards HIV/AIDS.

Among females, senior secondary or higher education status was significantly related to attitudes. Among males senior secondary or higher and middle/JHS education status was significantly related to attitudes. Young females and males with senior secondary or higher education had (female 0.320, male 0.489) more favourable attitudes and those

who had middle or junior secondary education had (female 0.071, male 0.258) also had more favourable attitudes than those with no education.

Number of sources of information was significantly related to attitudes. The results show that an increase in the number of sources led to more favourable attitudes among both males and females (0.025 and 0.032 respectively). Among females the richest showed more favourable attitudes (0.230) compared to the poorest, while among the males those of average wealth status had more favourable (0.805) attitudes.

Among males and females alike, the number of HIV/AIDS messages heard was significantly related with having more favourable attitudes. The results suggest that compared to not hearing or seeing any of the messages, hearing or seeing two and three messages resulted in 0.221 and 0.387 more favourable attitudes among females. Among males, hearing or seeing one, two and three message also resulted in 0.320, 0.333 and 0.545 more favourable attitudes than hearing none of the messages.

Table 8: Multiple linear regression analysis of the determinants of attitudes HIV/AIDS

	Female				Male			
	B	S.E	t	Sig.	B	S.E	t	Sig.
(Constant)	1.130	0.188	6.018	0.000	0.988	0.203	4.872	0.000
Age								
15-19(R)								
20-24	0.072	0.051	1.421	0.155	0.022	0.056	0.395	0.693
Region								
Upper East(R)								
Greater Accra	0.050	0.138	0.363	0.717	0.088	0.111	0.794	0.427
Central	-0.155	0.146	-1.058	0.290	-0.188	0.118	-1.604	0.109
Western	-0.078	0.140	-0.557	0.578	-0.328	0.112	-2.935	0.003
Volta	-0.024	0.150	-0.161	0.872	0.253	0.131	1.935	0.053
Eastern	-0.075	0.143	-0.524	0.600	-0.265	0.146	-1.810	0.070
Brong Ahafo	-0.062	0.133	-0.464	0.642	-0.361	0.108	-3.339	0.001
Northern	0.060	0.139	0.434	0.664	-0.013	0.142	-0.089	0.929
Upper West	0.168	0.180	0.932	0.351	-0.035	0.192	-0.182	0.855
Ashanti	-0.156	0.132	-1.177	0.239	-0.354	0.098	-3.620	0.000
Place of residence								
Rural(R)								
Urban	0.046	0.063	0.732	0.464	-0.041	0.069	-0.587	0.557
Education								
No Education(R)								
Primary	-0.081	0.080	-1.010	0.313	0.108	0.105	1.028	0.304
Middle/JSS	0.071	0.080	0.891	0.373	0.258	0.108	2.388	0.017
Secondary +	0.320	0.099	3.224	0.001	0.489	0.122	4.013	0.000
Religion								
Other Religions(R)								
Roman Catholic	0.287	0.132	2.184	0.029	0.194	0.114	1.700	0.089
Protestant	0.185	0.133	1.389	0.165	0.293	0.114	2.556	0.011
Other Christian	0.226	0.127	1.779	0.075	0.200	0.102	1.965	0.050
Moslem	0.153	0.134	1.141	0.254	0.161	0.117	1.371	0.171
Marital Status								
Never Married(R)								
Married/Liv.Tog.	0.009	0.059	0.160	0.873	-0.007	0.099	-0.067	0.947
Formerly Married	0.236	0.124	1.905	0.057	0.144	0.166	0.867	0.386
Ethnicity								
Other (R)								
Akan	0.124	0.091	1.363	0.173	0.022	0.094	0.240	0.810
Ga-Dangme	0.007	0.120	0.057	0.954	-0.121	0.135	-0.896	0.370
Ewe	0.030	0.107	0.282	0.778	-0.128	0.112	-1.140	0.254
Mole-Dagbani	0.049	0.096	0.517	0.605	0.330	0.095	3.489	0.000
Knowledge of HIV/AIDS	0.039	0.026	1.475	0.140	0.116	0.033	3.501	0.000
Number of Sources	0.025	0.010	2.561	0.010	0.032	0.011	2.913	0.004
Wealth Status								
Poorest(R)								

Poorer	-0.119	0.087	-1.370	0.171	-0.129	0.091	-1.413	0.158
Middle	0.022	0.087	0.247	0.805	-0.204	0.095	-2.137	0.033
Richer	0.069	0.096	0.724	0.469	0.032	0.108	0.297	0.766
Richest	0.230	0.106	2.171	0.030	0.184	0.120	1.530	0.126
HIV/AIDS Messages								
Heard none(R)								
Heard other messag.	-0.059	0.112	-0.527	0.599	0.197	0.152	1.299	0.194
Heard one	-0.044	0.126	-0.351	0.726	0.320	0.144	2.225	0.026
Heard two	0.221	0.124	1.777	0.076	0.333	0.145	2.289	0.022
Heard three	0.387	0.135	2.858	0.004	0.545	0.157	3.478	0.001

Computed from GDHS, 2003 dataset

Discussion

Prevention of HIV infection through behaviour change communication messages is a key strategy for the control of the HIV/AIDS pandemic. In Ghana people were informed about HIV/AIDS long before the first case was diagnosed in March 1986 (McCombie & Anarfi, 1992). The major reason for the early preventive education was that people 'should not be allowed to die of ignorance' (McCombie & Anarfi, 1992). This study showed a pattern of universal youth awareness of HIV/AIDS that is aligned with previous local studies which report that the majority of Ghanaian youth have heard about HIV/AIDS (Anarfi & Awusabo-Asare, 2000). Awareness of HIV/AIDS messages among the youth was relatively very high but higher among males (females, 93.1% and males, 94.4%). This could be due to an equally higher HIV/AIDS awareness levels among males. However, less than half of the respondents (females, 39.3% and males, 41.4%) had actually heard or seen all the three messages of the "stop AIDS love life" campaign. While there has been a major investment in BCC, it does not appear to reach everyone and for those it reaches the impact on attitudinal change is minimal.

A study among students in tertiary institutions in Ghana and Japan found that young people's first source of information on HIV was the mass media and their most important sources were the radio (46%) and television (27%) (Maswanya, Moji, Aoyagi, Yahata, Kusano, Nagata, 2000; McCombie & Anarfi et al.,1992). This is similar to the findings of this study where radio and television were the principal sources of HIV/AIDS information. In the absence of a formal HIV/AIDS education programme in the school curriculum, the mass media becomes a major source of information, with newer

channels such as the internet playing an increasingly important role for adolescents and youth [Borzekowski, Fobil & Asante, 2006]. Approximately 14% of females and 14% males had a high level of exposure to HIV/AIDS messages, accessing information from 11 communication channels including the mass media.

A large proportion of the youth knew a variety of HIV/AIDS prevention methods. Knowledge was higher among males than among females probably because of a higher level of awareness of HIV/AIDS and HIV/AIDS messages among males. About three in four (more than 75%) of young people knew they could reduce their risk of getting AIDS through each of HIV/AIDS prevention methods. This high level of HIV/AIDS knowledge can be attributed to the continuous HIV/AIDS education in the country since the mid 1980s.

The awareness of HIV/AIDS messages vary by background characteristics ranging from 92.6% to 100.0% which is probably due to the different number of media coverage in different areas. The ‘Stop AIDS love life’ slogan was more popular among the youth than the other messages (‘Reach out, Show compassion’ and the TV show ‘Things we do for love’). This may be due to the fact that the initial phase of the stop AIDS love life campaign was publicised through multiple communication channels (e.g billboards, branded clothing, car stickers, radio jingles) compared to the other slogans like ‘Things we do for love’ which were publicized through single channels like television. Some particular social contexts appeared to play important roles in access to BCC messages. For example, youth belonging to orthodox and charismatic Christian denominations had higher awareness of BCC messages that youth belonging to traditional religions. This could be that they heard the messages from their leaders. Since a key phase of the BCC campaign actively involved religious leaders of orthodox and charismatic churches.

Favourable attitudes towards HIV/AIDS were very low among both sexes. There was a clear association between relational proximity and favourable attitudes, with youth more likely to express favourable attitudes towards hypothetical family members than towards social acquaintances (teachers) and strangers (fruit vendors). Among the youth who had

heard or seen all of the three messages (40.0% of females and 41.1% of males) only 17.0% and 20.7% of females and males, respectively, had favourable attitudes. This was poor taking into consideration the proportion of young people who had seen or heard all the three messages and those who had seen or heard at least one message. A Ghanaian study conducted in the 1990s, reported similarly poor HIV/AIDS attitudes among students in tertiary institutions with respondents making remarks such as 'they should be sacked', 'they should be quarantined or killed', and 'they should be imprisoned with hard labour' (McCombie & Anarfi, 1992).

The study showed that education enhanced one's ability to access, process and use information. Although there was gaps between knowledge, attitudes and practice, youth with knowledge of HIV/AIDS were more likely to appreciate HIV/AIDS issues than those with no or little knowledge of HIV/AIDS. Knowledge of HIV/AIDS was significantly related to attitudes towards HIV/AIDS, indicating that as knowledge of HIV/AIDS increases attitudes also got better.

Prevention of HIV/AIDS infection through HIV/AIDS behaviour change communication (BCC) messages is a key policy strategy for the control of the HIV/AIDS epidemic in Ghana. BCC is viewed as an important component to multi-faceted interventions including making vaccines and drugs more available, accessible, and affordable. This study yielded important findings with respect to accessibility and cognitive impact of BCC messages among Ghanaian youth, a vulnerable and high risk group. The majority of young people had heard of HIV/AIDS and had heard multiple HIV/AIDS messages but few of them had favourable attitudes towards HIV/AIDS.

Conclusion

In conclusion, targeting the youth as a priority group for prevention interventions is an important strategy. However, the role of BCC messages needs to be critically evaluated and strengthened in terms of the reach of messages (rural, urban), the content of messages (focusing on relational proximity) and the channels through which messages are disseminated (moving towards multiple rather than single channels). BCC messages

also need to be embedded in community-based interventions that prioritise the role of the social environment in mediating everyday behaviours, such as is reported in Southern Africa (Campbell 2003; Low-Beer & Stoneburner, 2003). There was some evidence to suggest that using religious leaders in communicating HIV/AIDS messages may have had some impact among church attending youth. Future research needs to combine insights from quantitative surveys and qualitative community-based studies to fully understand the relationship between BCC messages, the social context and population attitudes to HIV/AIDS in Ghana.

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