

Influence of Multiple Media Channels on Adolescents' Knowledge and Intentions to use Contraceptives: A quantitative Study of Amasaman, the Capital of Ga West District Assembly in Ghana

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Abstract: Available literature depicts a strong association between exposure to mass media and intentions to use contraceptives in Ghana. However, little is known about the influence of multiple media on the reminiscence of exact contraceptive messages and intentions to use contraceptives among in-school and out-of-school adolescents. This article, therefore, examines adolescents' exposure to multiple media messages on contraceptives and its implications on message reminiscence. Their knowledge of the types of contraceptives, their intentions to use contraceptives and their perceptions of usage were also studied. A descriptive cross-sectional survey was conducted in Amasaman, the capital of Ga West District Assembly in Ghana. Quantitative data were collected from systematically sampled adolescents in-school and out-of-school. The findings indicate that all the adolescents had ever been exposed to media messages on contraceptives, but few had intentions to use a contraceptive within the year preceding the survey. The adverse intentions to use contraceptives were influenced considerably by their fear of being caught due to cultural norms against sexual intercourse at their stage, preference for abstinence based on religious doctrines and poor knowledge of contraceptive usage. Old adolescents (15-19 years) were exposed to multiple media messages on contraceptives more than young adolescents (10-14 years), while majority understood contraceptive messages from radio and television. Generally,

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there was positive association between exposure to multiple media and recollection of contraceptive messages. In conclusion, multiple media should be used to disseminate elaborative contraceptive messages to adolescents, in order for them to make informed choices and as a result enhance a healthy reproductive life. We suggest that the content of the messages should address negative religious and cultural perceptions about contraceptives, as well as educating them further on the available contraceptive methods.

Keywords: Exposure to media channels, Intention to use contraceptives, In-school adolescents, Out-of-school adolescents, Ghana

INTRODUCTION

A variety of research based on nationally representative surveys confirms associations between exposure to media messages and contraceptive usage (Agha, 2010). Others have shown that multiple media extend the reach of a family planning campaign (Hornik and Yanovitzky, 2003; Jato *et al.*, 1999). For instance, analyses of the 1989 Kenya Demographic and Health Survey found that contraceptive prevalence was nearly 50 percent among women who recalled hearing or seeing family planning messages from the media, compared with 14 percent who did not recall any family planning message (Jato *et al.*, 1999).

In Ghana, the main reproductive health needs of adolescents are preventing unwanted pregnancies and sexually transmitted infections (Awusabo-Asare *et al.*, 2004). This makes the use of contraceptives an important element in the discourse on ensuring a healthy reproductive life for adolescents in the country. In relation to this point, the mass media seem to be a reliable source for disseminating information on contraceptives to adolescents (Brown *et al.*, 2005). For instance, Ayi *et al.* (2010) found that exposure to media adverts in Ghana have significant influence on adolescents' use of medicines.

Awusabo-Asare *et al.* (2006) also discovered that since the introduction of modern contraceptives, the mass media have been used to advertise contraceptive products. Their study revealed that about 63 percent of adolescents who knew at least one contraceptive method obtained their information from the mass media. No wonder that the media has been described as a sexual 'super peer' for early maturing adolescents (Brown *et al.*, 2005).

Although numerous studies have been conducted on contraceptive usage in Ghana, little is known about the influence of multiple media on 'exact' message recollection, as well as intentions to use contraceptives, among in-school and out-of-school adolescents (Brown *et al.*, 2005). Understanding these issues will set a clear platform for designing appropriate strategies to reach out to adolescents in-school and out-of-school who have unmet needs. This study therefore examines adolescents' exposure to multiple media messages on contraceptives, using Amasaman, one of the district capitals in Ghana, as the study area. The findings are useful for understanding the nature of adolescents' exposure to multiple media and provide information to supplement the available literature on contraception.

MATERIALS AND METHODS

Study Area

The study was conducted in Amasaman, the capital of Ga West District Assembly. Describing some basic characteristics of the setting, Amasaman had a total population of 3,959 according to the 2000 Population and Housing Census, comprising 1,967 males and 1,992 females (Ghana Statistical Service, 2000). There were 626 households within the town. The average household size was 4.0 and the community had six hospitals. The people of Amasaman engage in farming and sand mining. Apart from these activities, they engage in traditional fishing in water bodies such as: Sunkwa, Nsakyee, Doblo and Ntafafa (GSS, 2000). The community's vegetation is purely Dry Coastal Savannah Shrubs. The community had one library (Kwashie Kumaman Community Library), which served as a source of print media information for adolescents. Four national television stations, namely, GTV, TV3, Metro TV and TV Africa, as well as other radio stations including Peace FM and Adom FM were common in the community. Amasaman was chosen for the study, because of its urban nature, which comprised adolescents at high risk of pregnancy (GSS, 2000).

Study Design, Data Sources and Sampling

Quantitative approaches to data collection and analyses were adopted in the study. By using this approach, the evidence collected focused on the exposure of adolescents to mass media messages on contraceptives, while placing emphasis on adolescents' in-school and out-of-school. The study was cross sectional, and samples of adolescents were drawn from the larger population. The target group was adolescents' in-school and out-of-school living in households within some arbitrarily selected electoral localities. This group of people was selected because they share a common growth and developmental experience with regard to reproductive health issues.

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There were about 451 adolescents listed within the identified households in the community. Two-hundred and eighteen were scientifically selected as the sample size. Systematic sampling technique was used to select the respondents. In order to arrive at the required sampling interval, the targeted population was divided by the desired sample size (451/218) yielding a sampling interval of $n = 2$. Therefore, every second household within the enumerated localities was chosen for data collection, until the desired sample size was achieved (Table 1). On that note, the sample fraction was similar for all the localities selected (Table 1).

Data for the study were collected from primary sources, using structured questionnaire consisting of open-ended and close-ended questions. A questionnaire was used because English is the official language in Ghana and can be easily read and written by most respondents. However, respondents who could neither read nor write were assisted in the filling in of the questionnaire. Four field assistants participated in a two-days training on the administration of the questionnaires. The participants were finally selected to constitute a team for the data collection. The selection was based on their performances in both the training and pre-testing of the questionnaires. A pre-test was carried out among ten adolescents at Kwashie Kumaman Community Library in Amasaman. Five questionnaires were given to the respondents to self-administer. The outcome of the pre-test suggested that the content of the questionnaire was easy to understand and did not contain ambiguities. A letter obtained from the Department of Population and Health of the University of Cape Coast was used to seek permission from the Ga West District Assembly. After permission was granted by the gatekeepers of the community, essential information including statistics on the study area was received from the Planning Officer and the Statistical Office at the Ga West Municipal Assembly. This aided in the categorisation of the community into electoral localities.

Free and informed consent of the participants or their legal representatives was obtained and the study protocol was approved by the appropriate Committee for the Protection of Human Participants. Ethics for conducting research were ensued during data collection and reportage. After the fieldwork, data collected were examined and edited. The questionnaires were coded and fed into the computer for analyses. The data were analysed using Statistical Product for Service Solutions (SPSS) version 12 software. Frequency distribution tables were drawn to report outcomes. Descriptive

statistics in the form of tables and bar chart were used to report the outcome of the study.

Table 1: Sample Size Distribution of Adolescents Shown by Electoral Localities

Electoral localities	In-school (N = 100)		Out-of-school (N = 118)		Total
	Males	Females	Males	Females	
Fise (Proper)	4	6	6	6	22
Fise (Down)	4	6	4	4	18
Abehenase	4	4	6	6	20
Gokukope	4	4	6	6	20
Agbelikope	6	4	4	6	20
District Court Area	4	4	6	6	20
Olympic Stadium area	6	4	4	6	20
Railway Valle	4	4	6	6	20
Yellow House Area	4	4	4	6	18
Amasaman Proper	4	6	6	6	22
Legion Village	6	4	4	4	18
Total	50	50	56	62	218

Source: Fieldwork, 2012

RESULTS

Exposure of Adolescents to Media Messages on Contraceptives

It was discovered that all the adolescents have ever been exposed to media messages on contraceptives, but their exposure was primarily measured within the year preceding the survey. As shown in Table 2, about three-quarters of the adolescents (75%) were exposed to media messages on contraceptives, within the last year preceding the survey. All the in-school adolescents aged between 15 and 19 years were exposed to media messages on contraceptives, while the out-of-school group experienced 95 percent exposure rate, within the same age range.

On the other hand, about half of those aged between 10 and 14 years were exposed to media messages on contraceptives, regardless of being in or out of school. Thus, those who were in-school were exposed to media messages on contraceptives more than those out-of-school (Table 2).

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Table 2: Adolescents' Exposure to Media Messages on Contraceptives by Age and Gender

Exposure of adolescents to media messages on	In-school (N = 100)		Out-of-school (N = 118)		
	10-14 years	15-19 years	10-14 years	15-19 years	Total
Exposure	56.1	100.0	50.0	95.3	75.4
No exposure	43.9	0.0	50.0	4.7	24.7
	Males	Females	Males	Females	
Exposure	56.0	78.3	72.4	94.9	75.4
No exposure	46.0	22.2	25.8	4.7	24.7

Source: Fieldwork, 2012

Knowledge of Contraceptives from the Media and Intentions for Usage

Nearly three-quarters of the adolescents (73%) were exposed to media messages on male condoms, but nearly one out of thirteen (8%) were exposed to media messages on female condoms (Table 3). Among the females who were in-school, one out of twenty (5%) reported of exposure to media messages on female condom, but approximately eight out of ten were exposed to media messages on male condom (Table 3).

None of the in-school respondents were exposed to media messages on vasectomy, spermicides and Norplant. While none of the males who were in-school were exposed to media messages on emergency contraceptive pills (ECP) and injectable, 10 percent and 5 percent of the female in-school were exposed to ECP and injectable respectively (Table 3). None of the out-of-school respondents were exposed to diaphragm messages from the media, but 7 percent and 3 percent of female who were out-of-school had heard of media messages on injectable and Norplant respectively. On the other hand, 5 percent of the male who were out-of-school were exposed to media messages on spermicides, whereas none of the females had ever heard of spermicides from the media (Table 3).

Table 3 further shows variations in the intentions of adolescents to use contraceptives after exposure to the media. About 7 percent of the males who were in-school had intentions to use contraceptives after exposure to media messages (Table 3). For females, none of the in-school respondents had intentions to use contraceptives after exposure to the media. Among the out-of-school respondents, 38 percent of males had intentions to use

contraceptives after exposure to the media, whereas 24 percent of females had intentions to use contraceptives after exposure to the media.

Table 3: Knowledge of Contraceptives from the Media and Intentions for Usage by Gender

Type of	In-school (N = 100)		Out-of-school (N = 118)		Total
	Males (n	Females	Males (n	Females(n =	
Male condom	85.8	79.8	66.6	58.7	72.7
Female condom	7.1	5.0	9.5	10.3	8.0
ECP	0.0	10.2	9.5	17.3	9.7
Injectable	0.0	5.0	0.0	6.9	3.0
Norplant	0.0	0.0	0.0	3.4	0.9
Spermicides	0.0	0.0	4.9	0.0	1.2
Diaphragm	7.1	0.0	0.0	0.0	1.8
Vasectomy	0.0	0.0	9.5	3.4	3.2
<i>Intentions to use contraceptives</i>					
Yes	7.0	0.0	38.1	24.2	17.3
No	93.0	100.0	61.9	75.8	82.7

Source: Fieldwork, 2012

Perceptions of adolescents about Contraceptive Usage after Exposure to Media Messages

Multiple response scales were used to measure their perceptions of contraceptive usage because some were expected to give multiple views. Among the respondents who had no intentions to use contraceptives, 76 percent gave the reason that they do not practice sexual intercourse due to cultural norms against sex at their stage (Figure 1). Approximately 59 percent had the perception that contraceptives are for married couples because of their religious doctrines against sex at their stage, while 47 percent did not have the intentions to use contraceptives, because they lacked knowledge of the procedures for usage. About 17 percent never had the intentions to use any contraceptive, because they did not trust the effectiveness of contraceptives, whereas 3 percent had no intentions of

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using contraceptives, because their religious affiliations frowns upon contraception, although they have been engaging in sexual intercourse (Figure 1).

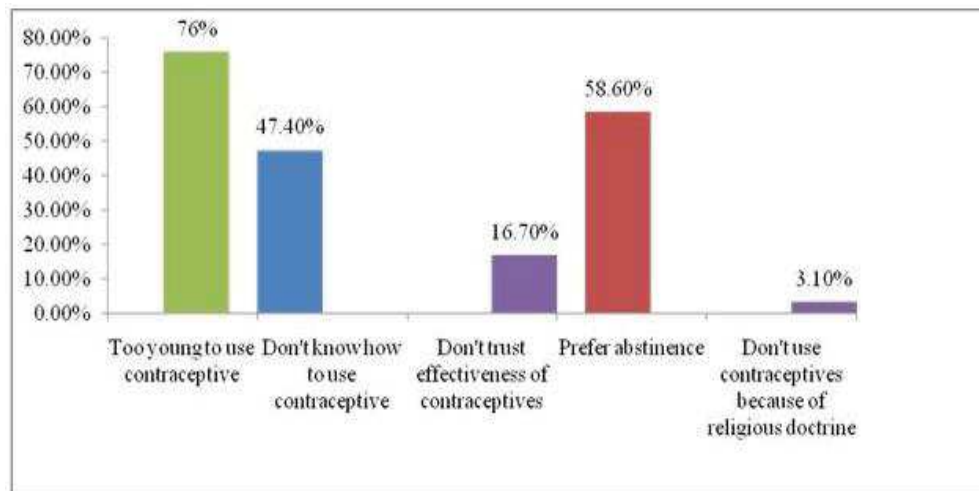


Figure 1: Adolescents' reasons for not using contraceptives after exposure to multiple media channels; N = 180

Source: Fieldwork, 2012

Influence of Multiple Media Sources on recollection of Contraceptive Messages

Table 4 shows exposure of adolescents to one, two or more media channels (television, radio, print media and internet) and recollection of contraceptive messages broadcasted by the channels. Recollection of contraceptive messages from the media was measured on two different levels. Respondents' ability to recall what was 'exactly' broadcasted and respondents' ability to recall at least 'any' message broadcasted.

To begin with, in-school respondents who were exposed to contraceptive messages from a single television channel were the majority to recollect the 'exact' messages. On the other hand, about 13 percent of males (in-school respondents) who were exposed to two television channels were capable of recollecting the 'exact' contraceptive messages, but none of those who were exposed to more than two television channels were capable of recollecting the 'exact' contraceptive message.

For those out-of-school, none of the females exposed to two or more TV channels could recall the 'exact' contraceptive messages, while less than a

quarter (20%) of those who were exposed to two or more television channels were capable of recalling the 'exact' contraceptive messages. Generally, those exposed to more TV channels could recollect at least a contraceptive message more than those exposed to fewer TV channels (Table 4).

In line with the general trend, majority of the respondents exposed to contraceptive messages from only one radio channel could recall the 'exact' message, but none of those in-school who were exposed to two or more radio channels could recall the 'exact' messages. Also, all the females who were out-of-school and exposed to two or more radio channels could not recollect an 'exact' contraceptive message (Table 4). In nexus with the trend found in television exposure, those exposed to more radio stations could recollect at least a contraceptive message more than those exposed to fewer radio stations.

For the print media, respondents' in-school could recollect at least a message from the newspaper more than magazines, pamphlets and posters, but none of those out-of-school could recollect a contraceptive message from the newspaper, magazines and pamphlet. Similarly, the in-school respondents exposed to the internet could recollect contraceptive messages from the media more than out-of-school respondents.

Table 4: Recollection of Media Messages on Contraceptives by Gender

Type of Media	In-school (N=100)		Out-of-school (N=118)		Total
	Males	Females	Males	Females	
<i>Television</i>					
Exact message recollection from 1 channel	75.0	78.5	59.8	77.0	72.6
At least 1 message recollection from 1 channel	84.0	86.5	62.4	83.2	79.0
Exact message recollection from 2 channels	12.5	0.0	20.1	0.0	8.1
At least 1 message recollection from 2 channels	87.6	88.4	71.5	87.4	83.7
Exact message recollection from more than 2 channels	0.0	0.0	19.9	0.0	5.0
At least 1 message recollection from more than 2 channels	96.4	96.7	96.7	98.2	97.0
<i>Radio</i>					
Exact message recollection from 1 station	85.7	100.0	76.8	69.2	82.9
At least 1 message recollection from 1 station	89.4	100.0	82.8	77.6	87.5

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station					
Exact message recollection from 2 stations	0.0	0.0	15.4	0.0	3.9
At least 1 message recollection from 2 stations	94.9	100.0	87.6	82.4	91.2
Exact message recollection from more than 2 stations	0.0	0.0	7.7	0.0	1.9
At least 1 message recollection from more than 2 stations	98.6	100.0	100.0	98.6	99.3
<i>Print Media</i>					
Recollection from newspaper	42.8	14.2	0.0	0.0	14.3
Recollection from magazines	33.4	0.0	0.0	0.0	8.4
Recollection from pamphlets	0.0	50	0.0	0.0	12.5
Recollection from posters	14.2	0.0	14.4	0.0	7.2
<i>Internet</i>					
Recollection from phone's internet	71.0	57.5	70.2	45.3	61.0
Recollection from internet at cafe	81.0	78.2	66.4	34.2	65.0

Source: Fieldwork, 2012

DISCUSSION

The general results of the study indicate that all the adolescents had ever been exposed to media messages on contraceptives, but not all of them were exposed to media messages on contraceptives within the last year preceding the survey. It was found that old adolescents (15-19 years) were exposed to media messages on contraceptives more than young adolescents (10-14 years). This confirms a research conducted in Uganda which revealed that exposure to family planning messages was high among old adolescents (Gupta *et al.*, 2003). The findings also echo a study conducted by Darteh and Amo-Adjei (2012) where old adolescents in Ghana had a higher exposure to media messages on contraceptives more than young adolescents.

Further, the findings indicate that the adolescents' high exposure to media messages on contraceptives did not reflect on intentions to use contraceptives. This somewhat refutes the works of Bankole and Westoff (1996) and Kancaid *et al.* (1996), implying that more research is need to clarify this argument. The major reason given for their low intentions to use contraceptives despite their exposure to multiple media is culture. Many considered sexual intercourse during adolescence as 'culturally' wrong. The implication is that the adolescents were likely to use contraceptives in the near future, as they begin to see themselves as culturally matured. Another notable reason was religion. While more than half felt that it is good to stay chaste due to their religious beliefs, an infinitesimal

proportion claimed their religious affiliations do not allow the use of contraceptives, regardless of a person's status and age. Others also did not know how to use the contraceptives and felt shy asking people about the procedures for usage. Hessburg *et al.* (2007), Amuyunzu-Nyamongo *et al.* (2005), and Fatima *et al.* (2003) similarly identified shyness as a barrier to contraceptive usage among adolescents. This attitude of shyness requires a remedy, in order to promote timely and appropriate usage of contraceptives among adolescents, especially as they become sexually active. Finally, less than a quarter did not trust the effectiveness of contraceptives, and as a result, had no intentions to use them. Moreover, the results point out that, majority of the adolescents (both in-school and out-of-school) was aware of condoms (particularly male condoms) more than other contraceptives. In congruence with the findings, the works of Gupta *et al.* (2003) in Uganda showed that condoms were the most popular choice of contraceptives reported by men. Though they were generally aware of condoms more than any other contraceptive, few adolescents were knowledgeable of female condoms compared with male condoms. In contrast, a research in Tanzania reported that 38 percent of the respondents were exposed to media campaigns on female condoms (Agha, 2002). In the case of this study, none of the male respondents were aware of injectable messages from the media. This means that media campaigns on female condoms and injectable are low in Ghana

A core objective of this article is to assess adolescents' exposure to multiple media messages on contraceptives and implications on message recollection. The findings demonstrate that respondents exposed to a single media channel could recollect the 'exact' message on contraceptives compared with those exposed to multiple media channels. On the contrary, those exposed to contraceptive messages from multiple media channels could recollect 'at least one message' on contraceptives more than those exposed to fewer media channels. The implication is that multiple media channels reinforce at least a message recollection, while single media channel reinforces 'exact' message recollection. This supports a research in Tanzania which revealed that women exposed to more types of media were likely to recollect contraceptive messages (Jato *et al.*, 1999).

Public Health Implications and Conclusions

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) reported that, each year, more than 585,000 women die of complications related to pregnancy and unsafe abortions, with about ninety-nine percent (99%) of these deaths occurring in developing countries such as Ghana (Miller *et al.*, 1998). People who are at the beginning of their

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reproductive lives particularly adolescents are at a higher risks (Miller *et al.*, 1998). In addressing these menaces including sexually transmitted infections, contraceptives provide effective protection when used correctly and consistently. Yet, many adolescents lack the adequate knowledge and information about modern contraceptives in Ghana, because many feel shy and/or reluctant in seeking for information on contraceptives from adults (Clottey, 2012).

In response to the limitations associated with seeking reproductive health information from adults, the mass media remains a powerful source of reliable information on contraceptives to adolescents (Clottey, 2012). Media advocacy experts believe that in most situations, the mass media is a key channel for spreading reproductive health information and for helping make reproductive health issues discussible (Hornik and Yanovitzky, 2003).

Based on the findings from the study, it is conclusive that exposure to contraceptive messages from the media are not the sole determinants of contraceptive usage, because a significant proportion of adolescents who reported of exposure to contraceptive messages from the media had no intentions to use contraceptives. However, awareness of contraceptive messages from the media was high among all the adolescents, indicating that the media is an effective source of knowledge about reproductive health issues. Multiple radio and television stations enable adolescents' recall at least one message on contraceptives more than single stations, but single stations are more effective in broadcasting an 'exact' contraceptive message.

The major reason given by adolescents for not using contraceptives was because their cultural and religious norms frowns upon sexual activities during that stage in life, and as a result, they are avoiding the shame cast upon them if they are caught engaging in it. This means that they were likely to use contraceptives in the future. On an important note, not all adolescents are capable of adhering to these cultural and religious norms against sexual intercourse. For this reason, there need to be educative programmes for them in order to address their unmet needs.

It emerged from the research that apart from the male condom, knowledge of other contraceptives was low; indicating that more work needs to be done in promoting other contraceptives to widen adolescents' choices.

When these findings are taken into consideration in adolescent reproductive health policies, many unwanted pregnancies and sexually transmitted infections among sexually active adolescents could be averted.

There were some limitations encountered during the study which need to be acknowledged. Despite the numerous statistics obtained from the Statistical Department of the Ga West Municipal Assembly, specific data on the various electoral localities within the community were unavailable. Thus, the 2000 Population and Housing Census captured data on the whole Ga West District, but did not capture specific data on the electoral localities within Amasaman. This led to the problem of getting the 'exact' population of adolescents in each electoral locality which would have made the data collection easier and richer. However, data on Ga West District was carefully used for references. Also, the findings were based on one community in Ghana; hence, making extrapolations to larger populations should be done with caution.

Policy Recommendations

Based on the findings, the following recommendations may be considered:

- (i) Multiple media channels should be used to disseminate information on contraceptives, because multiple media reinforce the recollection of at least one contraceptive message from the media, but single media channel should be used for specific and simple messages;
- (ii) Health agencies concerned about reproductive health issues of adolescents should spread their campaigns using radio and TV stations, because most adolescents were exposed to contraceptive messages from these media sources. However, religious and cultural norms against contraception should be addressed in the content of the contraceptive messages;
- (iii) Agencies concerned about adolescent reproductive health should educate adolescents on the procedures involved in using contraceptives, rather than just diffusing knowledge of the existing contraceptives;
- (iv) Other types of contraceptives such as: vasectomy, Norplant, injectable, female condom, spermicides, diaphragm and ECPs should be advocated by the media to enable adolescents who might dislike male condoms to have variety of choices;
- (v) To make the campaign more effective, other means of reaching adolescents such as through community durbars, school talks, churches and social media platforms should be used to complement the efforts of the mass media in promoting the use of contraceptives particularly among adolescents

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