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Promotion in Nigeria

Akinrinola Bankole

Macro International Inc.
Calverton, Maryland USA

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Akinrinola Bankole is a Research Associate at the Office of Population Research, Princeton University.

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Introduction

Concerns about high fertility and low contraceptive prevalence in sub-Saharan Africa have stimulated policy and program efforts aimed at promoting family planning in the region. Substantial money and time are currently being expended for the purpose of educating people about the advantages of fewer children and motivating them to adopt family limitation. The use of mass media to achieve these objectives has recently increased and both government and private agencies are involved in developing and implementing programs through the use of media facilities (JHU/PCS, 1991). The proponents of this approach have argued that the increasing availability of radio, television, and the print media in developing countries can be effectively used to influence people's behavior. Parlato (1990) argues that a well-designed media campaign can be effective in creating a positive social environment for a behavior by bringing about a shift in popular opinion. Piotrow et al. (1990) note that mass media can be a powerful tool not only for creating awareness about new technology but also for stimulating people's desires for more information and facilitating their efforts to apply the information to their own behavior.

Apart from simply advertising family planning in the media, the use of an "enter-educate" approach has become attractive to communication experts (Kincaid et al., 1992). This approach uses the entertainment components of mass media, such as song and drama, to drive home the intended message. The assumption here is that people tend to adopt a behavior faster if they are motivated by those they consider role models. Therefore, using popular and respected entertainers is believed to be an effective means of getting people to adopt a new behavior (Kincaid et al., 1988).

Evidence from recent studies on the interrelation between mass media and family planning in developing countries continues to mount in support of the claim that the media do influence behavior. Many of these studies have been reviewed in our previous work on Ghana (Olaleye and Bankole, 1994). For instance, studies such as those conducted by Bertrand et al. (1987) in Guatemala and Piotrow et al. (1990) in Nigeria document remarkably strong relationships between exposure to family planning messages in the media and contraceptive behavior. Westoff and Rodríguez (1993) examined the relationship between exposure to media messages on family planning and a number of indicators of reproductive behavior (including ever and current use of contraception, intention to use among nonusers, desire for more children, and ideal family size). The results indicate that women who are exposed to such messages in the media are more likely to use contraceptives and to desire fewer children (strong relationships that survive numerous controls). The study also documents a positive association between the intensity of exposure (measured by the number of sources of exposure) and reproductive behavior. In this study, we examine the role of mass media in the national task of promoting family planning and fertility decline (Federal Ministry of Health, 1988). The question is: Does the Nigerian Demographic and Health Survey show the strong positive relationship between mass media and reproductive behavior found in other DHS countries with similar data (e.g., Ghana and Kenya in sub-Saharan Africa)?

Quantitative and Qualitative Data

The Nigerian Demographic and Health Survey (NDHS) is one of the DHS-II surveys that included questions on the media and family planning. One survey question measured the proportion of the respondents who were exposed to family planning messages on radio and television in the last month before the survey (FOS and IRD/Macro, 1992). Using this information, we examine how media exposure to family planning messages relates to the reproductive behavior of the 6,696¹ married women interviewed in the survey. Unlike the case of some other DHS countries (e.g., Kenya and Egypt), the questions on media exposure are very limited, referring only to radio and television messages and using a very short reference period (1 month). Furthermore, the question precludes any analysis that attempts to separate or cumulate the effects of the exposure by source, i.e., radio, television, and print media.

Another matter worthy of note with regard to the present analysis is the problem of specifying causal direction between exposure to media messages and family planning. This is due to the absence of a temporal order of the relevant variables in the cross-sectional data (Olaleye and Bankole, 1994). Although the question on media exposure was asked with a clear time reference, it is unlikely that the respondents strictly adhered to the time frame. Also, the timing of the family planning behavior may not have been accurately reported in an environment where recalling dates or time of occurrence of retrospective events is problematic. Furthermore, responses to the question on media exposure may have been selective of family planning behavior. For instance, women who have used or are currently using family planning methods may be more responsive to media advertisement of family planning and may more likely report having heard or seen the messages than those who have not used any method (Westoff and Rodríguez, 1993). Under this circumstance, what can be known for certain is the association rather than the causal relationship between the two events.

To supplement the NDHS data, additional information on mass media and family planning was collected through a focus group study conducted in Ikire (a town in Osun State) and Erunmu village in Oyo State. Both places are not far from Ibadan, though Erunmu is closer. Proximity was thought necessary in order to constitute discussion groups that would include women who have access to the various media sources, especially television and newspaper. Two discussion groups, one of women age 15-29 and another of women age 30-45, were formed in each of the two locations. The groups in Erunmu consisted of eight married women each. Those in Ikire consisted of eight married women for the younger women's group and seven married women for the older women's group. The author acted as moderator for each group.

¹Because of nonproportional sampling rates, sampling weights were used. The weighted number of women in our analyses equals 6,879.

The main objective of the focus group study was to have in-depth discussion with small groups of married women on the subject of this paper in order to obtain greater insights into some of the issues than the NDHS data provided. Of special importance among these issues is the question of causality raised above. The analysis of the NDHS data assumes that exposure to media messages is the "cause" and family planning behavior the "effect." Although the causal path is not clear, the modeling choice was based on the more intuitive, educated guess about the direction of the association. In a previous work (Olaleye and Bankole, 1994), we explored the plausibility of this approach using an instrumental variable model to estimate the relative influence of the two variables on each other. Although the results supported the assumed causal path stated above, the problem is far from being solved. In this paper, we attempt to further illuminate the problem by presenting evidence from a focus group study.

In general, matters discussed include ownership of and access to mass media sources; exposure to and attitudes toward family planning messages in the media; attitudes toward family planning, contraceptive behavior, and the timing of exposure to media messages; and contraceptive use. On each of these topics, leading questions were prepared before the meetings in order to better organize and focus the discussions. As the discussions progressed, additional questions were introduced as necessary.

Background Information on the Nigerian Situation

Undertaking this type of study for Nigeria is important at this time for several reasons. First, fertility remains high in the country, though there is initial evidence that it may have started to decline in the South. Second, a considerable number of programs to reduce fertility utilize the mass media, an exercise that has become popular in the country, particularly since 1988. On February 4th, 1988, the Armed Forces Ruling Council approved the first explicit national policy on population for the country. One goal of the policy is "to achieve lower population growth rates, through reduction of birth rates by voluntary fertility regulation methods that are compatible with the attainment of economic and social goals of the nation" (Federal Ministry of Health, 1988: 13). Following the launching of the policy, relevant government and private agencies stepped up their activities to educate people about fertility control.

Between 1988 and 1990, when the Demographic and Health Survey was conducted, a number of family planning promotion programs were implemented through radio and television. The day after the inauguration of the policy, a video documentary, "Our Destiny Is in Our Hands," was broadcast on national television. The documentary drew from national population statistics to educate people about the socioeconomic consequences of rapid population growth (JHU/PCS, 1990).

A major family planning promotion campaign based on the use of the "enter-educate" approach was implemented in 1989-90. The campaign used two music videos produced for television in August 1989 by popular Nigerian artists (King Sunny Ade and Onyeka Onwenu) as well as extensive publicity and public relations activities by the

musicians. The objective was to promote family planning, the Planned Parenthood Federation of Nigeria's clinics, and government services by using local artists with whom people are likely to identify (JHU/PCS, 1990; Kincaid et al., 1992). Other media-based projects were undertaken to promote family planning before the NDHS was conducted, including short dramas on radio and television at the national and State levels (JHU/PCS, 1990).

Evaluation studies of some of these programs have reported significant changes in people's contraceptive attitudes and behavior attributable to the media promotion of family planning. In a report on the music videos project, an average of 64 percent of the urban residents interviewed claimed to have heard the songs or seen the videos. Further, about 95 percent of those who have either heard the songs or saw the videos were able to correctly identify the message of the songs as "Practicing family planning allows a couple to prepare for having children" or "Today there are ways of making love without making children" (JHU/PCS, 1990: 43). In another evaluation of the music videos campaign, modern contraceptive use among respondents age 15-35 years in Lagos, Enugu, and Kano was found to increase from 15.7 percent before the campaign to 26 percent after the campaign (Kincaid et al., 1992).

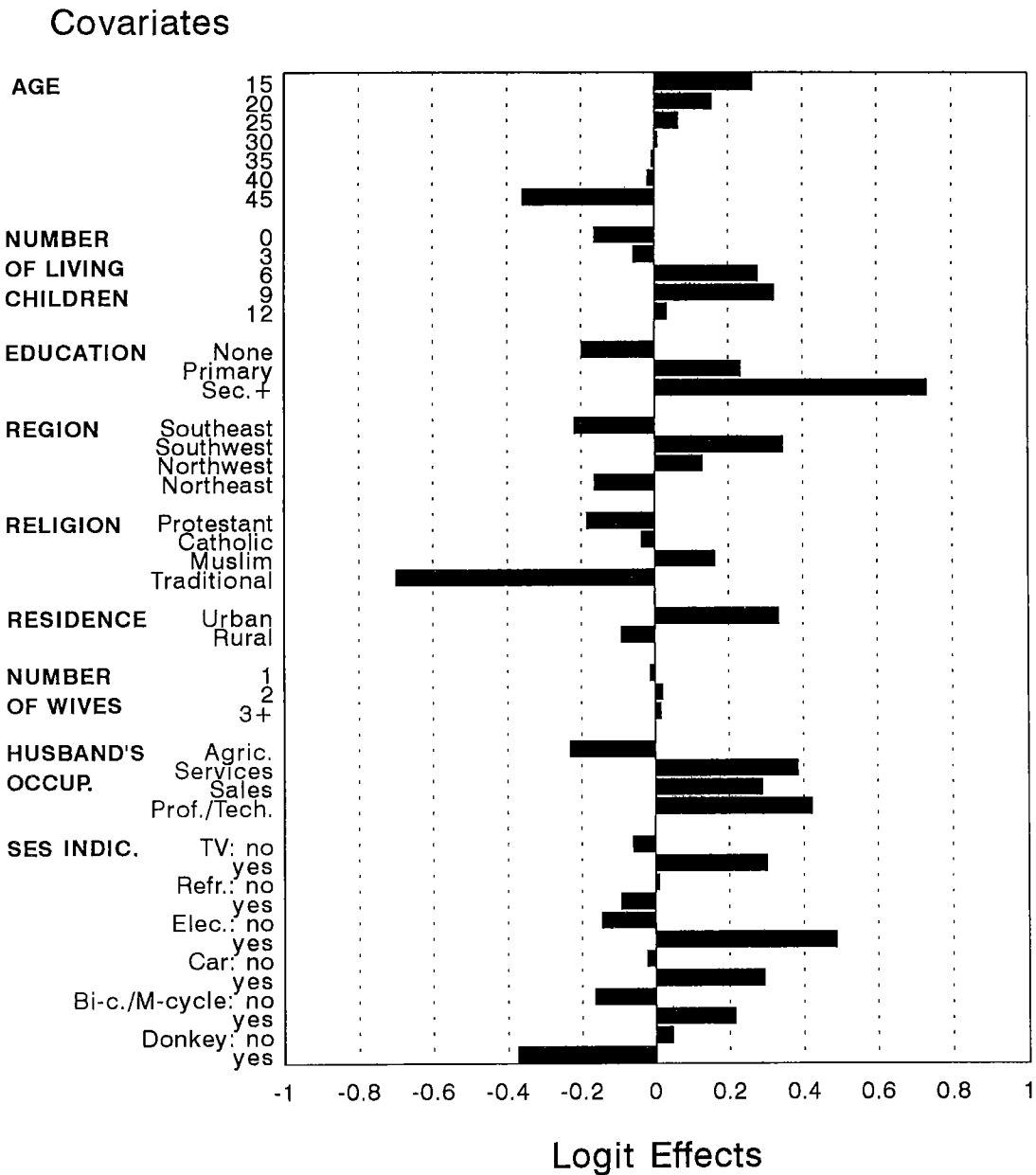
Determinants of Exposure to Family Planning Messages

The Nigerian DHS data indicate that of the 6,696 married women interviewed in the survey, 50.5 percent listened to radio and 20 percent watched television at least once a week. About 23 percent of the women have heard or seen family planning messages on the radio or television. As would be expected, the experience differs by residence. About 50 percent of the urban residents were exposed to media advertisements of family planning compared to only 15.6 percent of those residing in rural areas. The presence of radio or television in the household predisposes the women to media exposure. About 35 percent of the women who reported having a radio in the household were exposed to family planning messages compared to 8.6 percent of those who did not have a radio. Similarly, 54.8 percent of those who had a television were so exposed compared to 16.8 percent of those who reported having no television set.

As the above examples suggest, there is no reason to believe that exposure to media promotion of family planning will be independent of other socioeconomic and demographic variables. In this section, we discuss the correlates of exposure to family planning messages on radio or television in Nigeria. We used logit regression for the analysis with age, number of living children, education, region, religion, residence, number of wives, husband's occupation, and a number of household possessions as predictors. Age and the number of living children were modelled using natural cubic splines with two interior knots (see Westoff and Rodríguez, 1993). All other explanatory variables were represented by dummy variables. The dependent variable—media exposure—is a dichotomous variable and assumes a value of "1" if a woman reported having heard or seen a family planning message on radio or television or "0" otherwise.

Figure 1 shows the results of the logit regression. The logit effects for each variable have been standardized to have a weighted sample mean of "0" so that the appearance of the graph will be independent of the choice of reference category.

Figure 1. Socioeconomic and Demographic Correlates of Exposure to Mass Media Messages



As one would expect, age is negatively associated with exposure to family planning information in the media. On the other hand, the number of living children tends to show a positive relationship with media exposure up to the eighth child, after which the association becomes negative. A similar pattern was found for Kenya (Westoff and Rodríguez, 1993). The negative relationship between media exposure and the number of living children at higher parity—when age is controlled—could be a selection effect.

Education shows a positive association with media exposure. Those with secondary or more education are 2.5 times as likely to be exposed as those with no formal education. Women in the Southwest region tend to be the most exposed to media promotion of family planning. This is not surprising, especially because Lagos is located in the region. However, contrary to expectation, women in the Southeast are less likely to be exposed to family planning messages in the media than those in the North, after controlling for other variables, including education. The results with respect to religion show a similar surprise. Christians are less likely to have heard or seen family planning messages in the media when other variables are taken into account. Again, education is a strong control variable in producing this relationship. Women with traditional religion are the least exposed, although the huge effect applies only to a small group.

The higher likelihood of media exposure reported earlier for female urban residents based on the bivariate analysis was not significantly attenuated when we controlled for other variables. Urban women are 53 percent more likely to have heard or seen family planning messages on the radio or television than those who live in rural areas. When the husband is engaged in an agricultural occupation, the wife is least likely to be exposed to media messages about family planning. On the other hand, women are most likely to be so exposed if their husbands are in professional or technical employment. The presence of television, car, bicycle/motorcycle, or electricity in the household is positively associated with being exposed to media messages on family planning.

Family Planning Messages and Reproductive Behavior

Since the inauguration of the national policy on population, research efforts to monitor changes in reproductive behavior in Nigeria have been intensified (FOS and IRD/Macro, 1992; FHS, 1992). Some of this research was conducted to evaluate the impact of specific family planning campaigns through the media. There is now evidence that significant changes have been taking place with regard to contraceptive use (FHS, 1992; Caldwell et al., 1992). For instance, Family Health Services (FHS, 1992) has documented trends in contraceptive knowledge and use since the time of the Nigerian Fertility Survey (NFS). Contraceptive knowledge increased from 33.6 percent in the 1981-82 NFS to 45.7 percent in 1990 as reported by the NDHS, and then rose to about 83 percent in 1992, according to the Federal Office of Statistics (FOS). Similarly, current use of any method rose from 5.0 percent (NFS) in 1981-82 to 6.0 percent (NDHS) in 1990, and now stands at 21.9 percent as reported by the FOS. It should be noted,

however, that the reported increase in contraceptive knowledge and use between 1990 and 1992 is unprecedented and needs further investigation.

With regard to fertility behavior, there is initial evidence that fertility may have started to decline in the southern part of the country. Between 1981-82 and 1990, the total fertility rate (TFR) declined by 17.4 percent in the Southwest and 7.5 percent in the Southeast. Within the same period, the TFR was unchanged in the North (NPB and ISI, 1984; FOS and IRD/Macro, 1992). In 1990, the NDHS reported TFRs for the South that were, on the average, about one child lower than the rate for the North and about half a child lower than the rate for the whole country. (FOS and IRD/Macro, 1992).

The rapid increase in contraceptive availability and adoption since 1988 can be attributed largely to the national population policy and its program efforts. The adoption of the policy may have sent a message to the people that contraception is desirable, thereby undermining the popular notion that contraceptive use is immoral. Thus, both the suppliers and potential users may have found support for their action in the policy (Caldwell et al., 1992). Therefore, it is more likely that programs undertaken to promote family planning will have some impact on people's reproductive behavior in the country.

Next, we examine the association between media promotion of family planning and various indicators of reproductive behavior. The analytic strategy follows the approach adopted by Westoff and Rodríguez (1993). Their paper contains an appendix that explains the methodology in greater detail than presented here. We used both logistic and linear regression models. Where the dependent variable (an indicator of reproductive behavior) was categorical, logit regression was used. When the variable had more than two outcomes, we used a hierarchical or nested logit model to compare two categories at a time. Linear regression was used to predict the mean ideal number of children. Again, media exposure is a dichotomous variable that takes on a value of "1" if a woman is exposed and "0" otherwise. To estimate the net effect of media exposure, we controlled for variables that may have impact on the relationship between media exposure and reproductive behavior. The control variables, age, number of living children, education, region, religion, place of residence, number of wives, husband's occupation, and some household possessions, are those listed in Figure 1.

Contraceptive Use and Intention

The contraceptive status of the women can be classified along a continuum that starts with the absence of contraceptive knowledge and ends with current use of contraception. Table 1 shows the *gross* relationship between the contraceptive status of the women and their exposure to family planning messages on radio or television.

Table 1. Contraceptive Practice and Intention by Exposure to Media Messages about Family Planning

Contraceptive Status	Exposure to Family Planning (FP) Messages			
	Heard No Messages	Heard Messages	<u>Total</u> %	N
Knows no method	65.5	25.2	56.2	3867
Knows method, never used, not sure of using/Not intending to use	16.8	25.0	18.7	1286
Knows method, never used, intends to use	8.1	19.6	10.8	741
Used in the past, not intending to use	3.1	4.8	3.5	237
Used in the past, intends to use	2.7	12.1	4.9	333
Currently using	3.8	13.4	6.0	415
Percent total	100	100		100
Number of women	5293	1586		6879

The results indicate that women who are exposed to media messages are more likely to be favorably disposed to contraceptive knowledge and use and tend to be further along the continuum described above. About 25 percent who reported having heard family planning messages in the media claimed to know no method. This may be associated with the fact that some family planning messages focus on the advantages of small family size without mentioning specific methods.

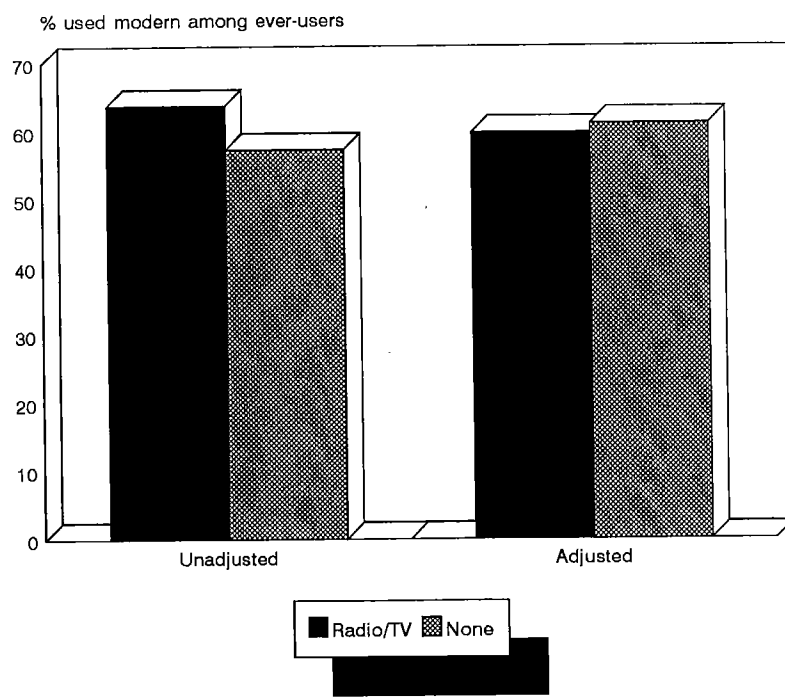
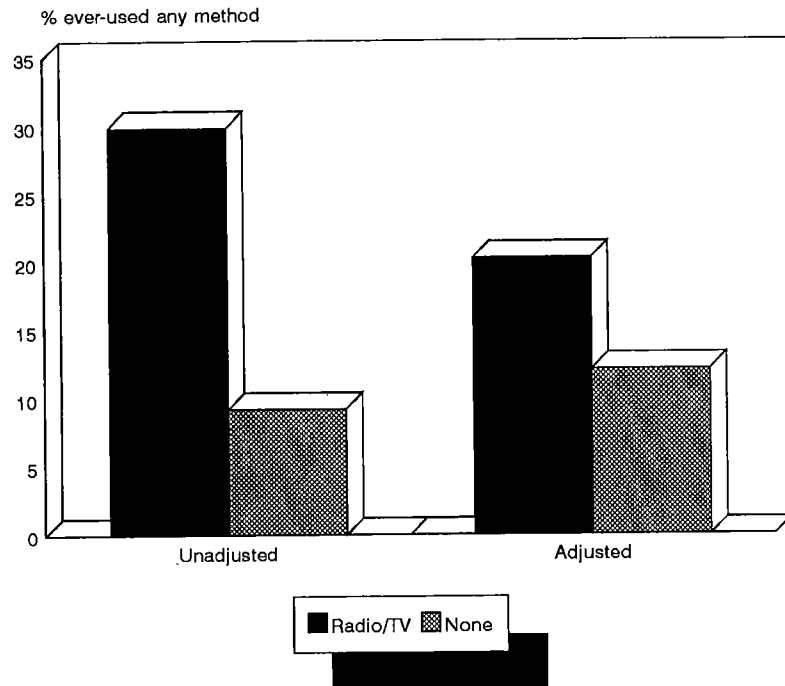
We now examine with logistic regression the *net* effects of media exposure on three indicators of contraceptive use: ever-use, current use, and intention to use. The ever-use variable distinguishes modern and traditional methods and therefore we first compared women who have ever used any contraceptives with those who have never used. Then, we compared those who have ever used a modern contraceptive with those who have used only traditional methods. The results are shown in Panel 1 of Table 2 and in Figure 2.

Table 2. Effects of Exposure to Media Family Planning (FP) Messages on Selected Indicators of Reproductive Behavior Unadjusted (U) and Adjusted¹ (A) for Socioeconomic Controls

Variable and Indicator		Exposure to Family Planning Messages		All	Chi-square or F	Degrees of Freedom
		No	Yes			
1. Ever-Use of Contraception						
% ever used any method	U	9.2	29.9	14.0	368.1	1
	A	12.1	20.3	14.0	45.3	1
% used modern among users	U	57.3	63.8	60.5	5.3	1
	A	61.1	59.8	60.5	0.2	1
2. Current Use of Contraception						
% currently using any method	U	3.8	13.4	6.0	161.3	1
	A	5.4	8.0	6.0	10.9	1
% using modern among users	U	52.9	64.3	58.7	7.2	1
	A	53.5	63.6	58.7	4.1	1
3. Intention to Use in Future						
% intends to use in future	U	17.0	44.0	22.8	385.2	1
	A	19.0	36.7	22.8	122.6	1
4. Desire for Future Birth						
% wants no more children	U	14.8	20.5	16.1	26.9	1
	A	15.4	18.5	16.1	4.7	1
% spacers among nonlimiters	U	47.3	50.8	48.1	3.9	1
	A	48.4	47.1	48.1	0.3	1
5. Ideal number of children						
% gives numeric response	U	29.3	46.3	33.2	150.2	1
	A	32.1	36.9	33.2	7.9	1
6. Ideal number of children for numeric respondents						
Mean ideal number	U	6.51	5.53	5.7	77.0	1
	A	6.07	5.65	5.7	13.4	1

¹ Adjusted figures are derived from the results of linear regression for the ideal number of children and nested logit regression models for all other indicators. The figures have been scaled to reproduce exactly the sample total (see column 5). In all cases, we controlled for age, number of living children, education, region, religion, residence, husband's number of wives, husband's occupation, and a number of household possessions.

Figure 2. Mass Media Messages and Ever-Use of Contraception



Exposure to media promotion of family planning is positively associated with ever-use of any contraception, both before and after controlling for other covariates. The *net* effect of media exposure is that the proportion of exposed women who have ever used contraception is 8.2 percentage points higher than that of the unexposed women who have ever used. But given that a woman has used contraception, there is no evidence that media exposure makes her more likely to have used a modern method than a traditional method. Thus, the significant effect of media exposure on method choice observed in the bivariate relationship (shown also in Table 2) vanishes when other variables are controlled.

The analysis with regard to current use follows a similar procedure. We first compared those who are currently using any method with nonusers. Then among current users, we compared use of modern methods with use of traditional methods. The results in Panel 2 of Table 2 and in Figure 3 show that exposure to media messages is positively related to current use of any method.

Similarly, current users who have heard or seen family planning messages on radio or television are more likely to be using a modern method than current users with no media exposure. This relationship is only slightly attenuated when other variables are controlled. The proportion of the exposed women who currently use contraception is 10 percent higher than that of the unexposed who are current users.

The next analysis concerns intention to use contraception in the future. Here, we simply contrast nonusers who reported that they intend to use contraception in the future with those who did not or who were uncertain about future use. Thus, the variable assumes the value of "1" if a nonuser intended to use and "0" otherwise. The results of the logistic regression are presented in Panel 3 of Table 2 and in Figure 4.

Figure 3. Mass Media Messages and Current Use of Contraception

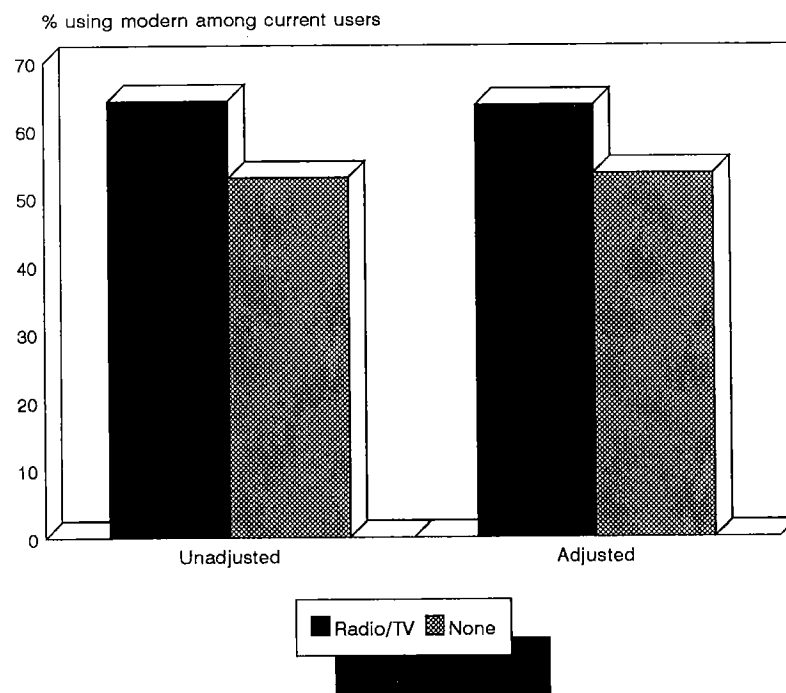
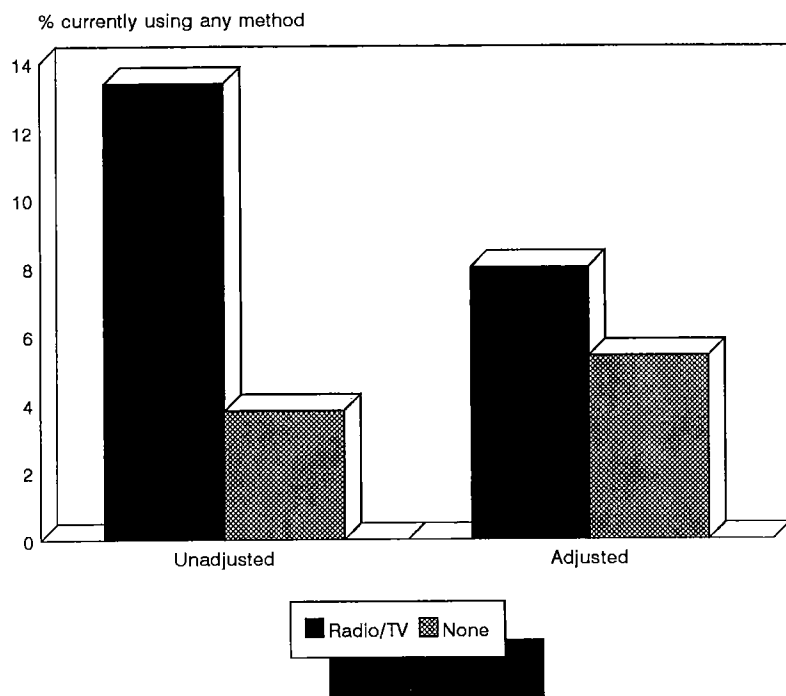
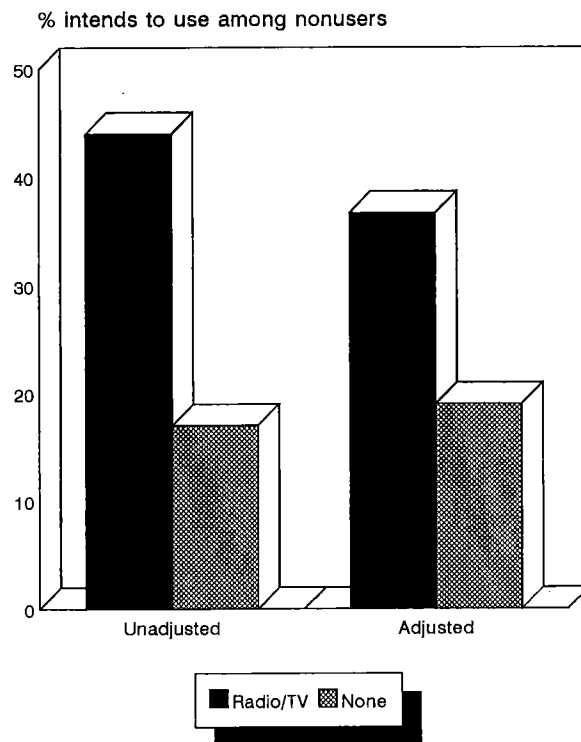


Figure 4. Mass Media Messages and Intention to Use Contraception

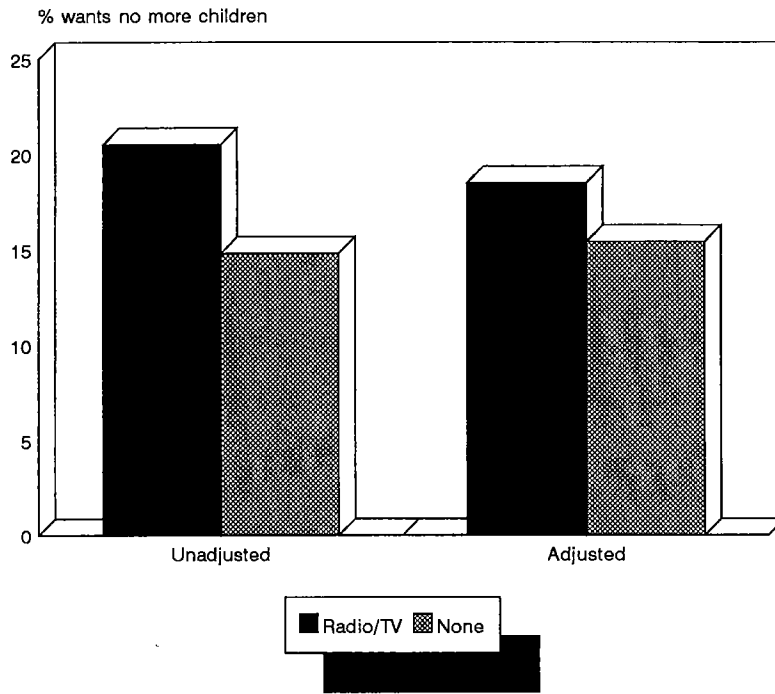


A strong positive relationship is found between exposure to media messages and intention to use contraception. The association remains strong even when possible confounding effects of other variables are taken into account. After controlling for other variables, 36.7 percent of the women who have ever heard or seen media messages intended to use contraception in the future, compared to only 19 percent of those who were not exposed to media messages.

Reproductive Preferences

In this section, we analyze the association between exposure to family planning messages and the desire for more (or no more) children and ideal family size. First, we compared a definite desire to stop having children with a desire for additional births (including undecided). Among those who expressed a definite desire for more children, we compared women who intended to wait for at least 2 years with those who preferred another birth within 2 years. The results are shown in Panel 4 of Table 2 and in Figure 5.

Figure 5. Mass Media Messages and Desire for Future Birth



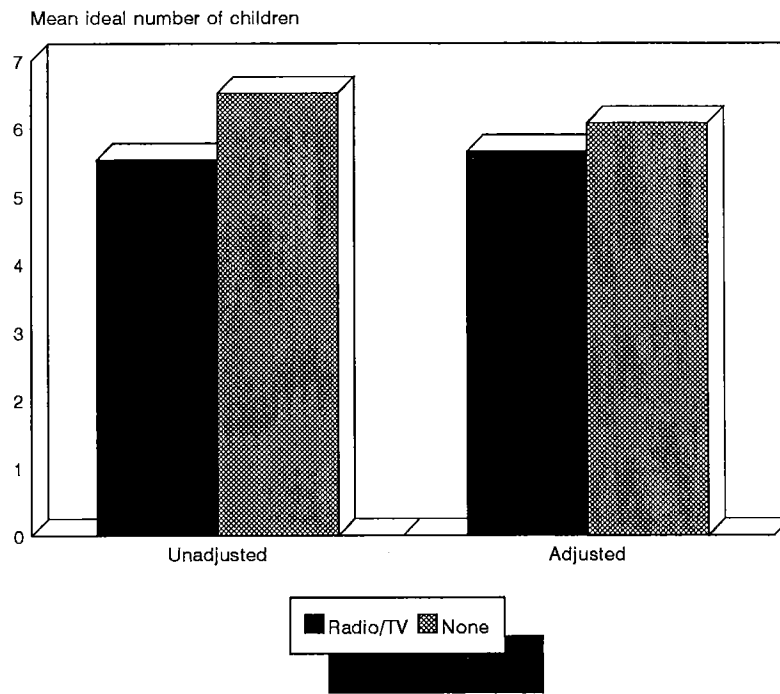
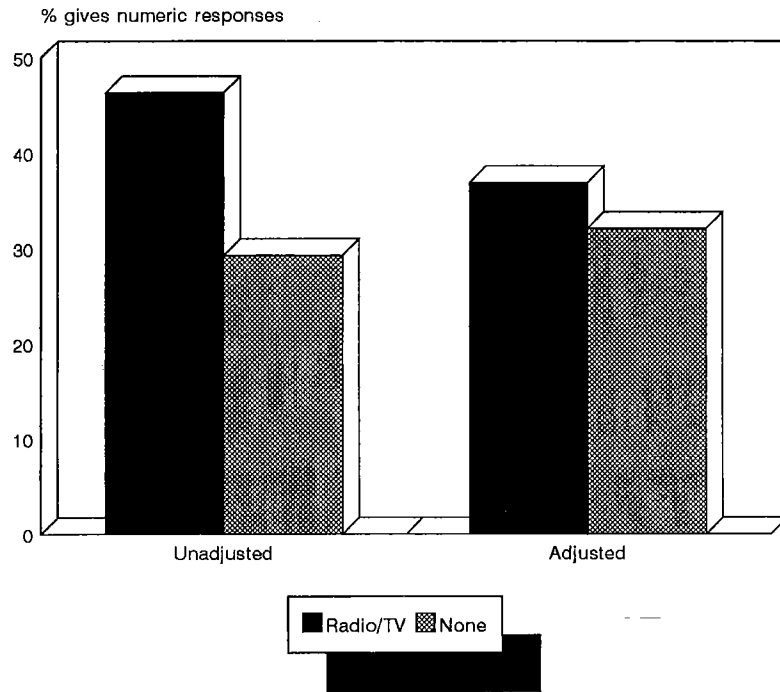
Women who are exposed to family planning messages are slightly more likely to desire no more children even when other variables are controlled. But given that a woman desires to have more children, her desire to wait or to have another child within 2 years is independent of exposure to media messages when the influence of other variables is controlled. Thus, media messages seem to be associated with a desire to limit fertility but not with a desire to space births.

The analysis of ideal family size was undertaken in two stages. First, we used logistic regression to contrast numeric versus nonnumeric responses among all the women. The assumption here is that women who are exposed to family planning messages will have a greater awareness that they can determine the number of children to have, and will tend to give numeric answers to the question on desired or ideal number of children. The ability or willingness to give numeric answers to such questions (rather than saying "up to God" or "husband's wish," etc.) is sometimes treated as an indication of a tendency toward lower fertility (Fapohunda and Todaro, 1988). The results are presented in Panel 5 of Table 2 and in Figure 6.

With or without controlling for other variables, women who have heard or seen family planning messages in the media are indeed more likely to have a definite idea of their ideal number of children. After controlling for other variables, the proportion of the women who were exposed to media messages and gave numeric answers is 4.8 percent higher than that of the women who were never exposed to media messages but gave numeric responses.

In the second stage of the analysis, we used ordinary least squares regression to estimate the mean ideal number of children for those who gave numeric responses. The results shown in Panel 6 of Table 2 and in Figure 6 exhibit the expected pattern. Exposure to media promotion of family planning is negatively related to ideal number of children. Before controlling for the effects of other variables, women who were exposed to media messages have a mean ideal number of children about one child less than those who were not exposed. This difference is reduced by about one half of a child when we control for the confounding influence of other variables. Nevertheless, the difference remains statistically significant.

Figure 6. Mass Media Message and Ideal Number of Children



Evidence from the Focus Group Study

Access to Mass Media Sources and Exposure to Family Planning Messages

The study started with a discussion of the prevalence of ownership of and access to mass media sources, particularly radio and television, in two study locations. The discussion showed that the majority of the participants have radio and television sets in their households. Also, as expected, many more of the participants have access to mass media information than owned the media sources, since most of the women claimed that they listen to radio or watch television every day. This is consistent with an earlier report on Ghana based on the Demographic and Health Survey data (Olaleye and Bankole, 1992). That ownership of a mass media source does not adequately represent exposure to media messages is a known fact in sub-Saharan Africa. The social systems in these countries encourage communal living and sharing. Thus, listening to radio or watching television in a neighbor's home is a common phenomenon and, in some cases, the government established community viewing centers where people can watch television programs.

It should be noted, however, that the frequency of exposure to media messages was conditional on electricity (supply) among other factors. One participant in Erunmu noted that:

"I watch television every day when I am at home and (when) there is electricity (supply)."

Another woman in Ikire expressed a similar view. She contended that:

"We listen to radio and watch television every day except when we are at work or there is a power failure."

The reference to electricity supply is important since "power failure" is not an infrequent occurrence in Nigeria. This suggests, in effect, that constant power interruption can mitigate the potential positive influence of mass media promotion of family planning.

Only a few participants claimed to read newspapers or magazines occasionally. They argued that newspapers are so expensive that they cannot afford to buy them. Those who read them do so only when they find copies bought by other people. Therefore, apart from illiteracy, the newspaper and magazine audience is further reduced by the high cover prices. Most daily newspapers were selling for N10 and magazines for N20-N30 at the time of the study.

Every participant has heard or seen at least one family planning message in the media. All claimed to have heard or seen family planning messages on radio, television, and posters; a few said they have also read such messages in newspapers. The lowest observed exposure to family planning messages (through newspapers) is associated not

only with the smaller audience, but also with the less frequent use of the medium for that purpose. To further examine how much exposure to family planning messages in the media the women actually had, we asked whether or not they had heard or watched six specific family planning campaigns known to have taken place in the area. The campaigns were "Choices," "Wait for Me," "To Be Forewarned," six "PSA Spots," "The National Child Spacing Symbol," and "Right Time Condom." The responses show that the campaigns tended to have good coverage in both test locations.

The women vividly recalled hearing or seeing most of the listed advertisements. The involvement of popular artists with some of the programs enhanced the participants' ability to remember having listened to or watched a campaign. Many of them associated the advertisements with the artist(s) involved. Some of the participants who did not spontaneously recall having heard or seen a campaign did so when a popular artist featured in the program was mentioned. This was particularly the case for "Choices" and "Wait for Me," two music videos by Sunny Ade and Onyeka Onwenu; "To Be Forewarned" by Moses Olaiya (alias Baba Sala); and one of the "PSA Spots" that features Bello, a popular Yoruba dramatist. This finding reinforces the argument of the proponents of the enter-educate approach that the use of local popular artists is crucial to making people identify with a campaign and its message(s). In fact, some respondents claimed that they also heard Kollington Ayinla—a popular Fuji musician—promote the "Right Time Condom" in one of his albums.

As stated earlier, the question on mass media promotion of family planning had a time reference of 1 month before the survey. But media promotion of family planning had been in existence for a considerably longer time. To get some idea of how far back people had been exposed to family planning messages in the media, the participants were asked to recall the first time they had heard or seen such messages. Although the responses may not be quite accurate due to the recall problem, the finding generally tends to be supported by the knowledge of when the media really became involved in family planning promotion in the country. The earliest reported first-time exposure was 1982, but most participants who were able to recall when they first heard or saw family planning messages in the media claimed they did so between 1986 and 1990. The year 1989 was the most frequently mentioned. The clustering of the responses around 1989 is interesting. It should be noted that one of the earliest information, education, and communication (IEC) family planning campaigns was integrated into two programs ("Koko Close" and "Mulero") of NTA Ibadan in 1987 (Piotrow et al., 1990). The use of mass media for promoting family planning was further shot into prominence by the adoption of the National Population Policy in 1988. Therefore, it is not surprising that the women in this study first saw or heard family planning messages in the media about that time.

Family Planning Attitudes and Contraceptive Behavior

Before examining the influence of family planning messages on the participants, we discussed their contraceptive behavior and attitudes toward family planning. Evidence among the participants confirmed previous findings that

contraceptive prevalence is low among married women in Nigeria. Less than half claimed to have ever used any method of birth control. These ever-users were not homogeneous in terms of method used, age, and number of living children at first use. For instance, the ever-users in the Ikire groups have used IUD, rhythm, pills, and ring, whereas those in Erunmu have used condoms and rhythm. In Ikire, the ages of the ever-users and the number of living children at first use ranged from 23-27 years and 1-4 children, respectively, for the younger women, and 25-30 years and 1-4 children, respectively, for the older women. In Erunmu, the ages of the ever-users and number of living children at first use ranged from 23-24 years and 0-1 children, respectively, for the younger women, and 25-34 years and 1-2 children, respectively, for the older women.

Some participants were using some methods of family planning, e.g., IUD, rhythm, and ring, at the time of the study, mainly for spacing. The current deplorable economic condition in the country may have made using contraceptives for spacing compelling. One of the participants claimed:

"I am using a method of family planning in order to space my children so that I will be able to take proper care of them."

Another one said:

"I use a contraceptive so that I will not get pregnant at this time."

When asked whether she had enough children she said no, but she intended to rest for a while.

As expected, the reasons for using differ by age group. Current users who said they were using for spacing belonged to the younger group and those who were using for stopping belonged to the older group. In both places, every nonuser, except one in Ikire, expressed the desire to use a method in the future. Reasons for nonuse were primarily lack of interest, husband's opposition, and the fear of side effects. Some participants gave instances of contraceptive side effects from their own experiences or those of their friends. For instance, one of them said the following:

"One friend of mine had IUD planted in her. After a year, she started bleeding and because of the bleeding, her husband who did not know when she obtained the method got to know that she did family planning. She went back to where she obtained it and it was removed. She said she will never use it again."

The absence of privacy in focus group study is often feared to elicit a tendency on the part of the participants to suppress information on sensitive issues. This likelihood was manifested in this study with regard to our discussion of contraception. In both study locations, and particularly in Erunmu, the participants were very enthusiastic to discuss knowledge of family planning, but less so when the discussion moved to contraceptive use. They had to be appealed to before they became comfortable enough to talk. There is enough evidence to believe that contraceptive use was understated by the participants.

Steps Taken Due to Family Planning Campaigns in the Media

Since the main objective of media promotion of family planning is to educate the audience and to motivate them to act positively toward family planning, we discussed the effects of the family planning messages that participants claimed to have heard or watched. In other words, what steps or actions did a participant take as a result of a family planning message in the media? The responses suggest that media promotion of family planning does indeed influence listeners or viewers not only to adopt a positive attitude toward family planning, but also to adopt contraception. Although not every participant did something, more than half said they took one step or another after listening to or watching a family planning advertisement.

Actions taken by the participants ranged from telling other people (particularly husbands and friends) to visiting hospitals or family planning clinics for advice and/or to obtain a method. A number of interesting claims came up during the discussion of this particular issue, some of which showed that both males and females may be becoming more receptive to family planning. Two such statements follow:

"I made a decision with my husband that by God's grace we will not have more than two children. As things are in the country today, one does not need to be told repeatedly before taking necessary steps to limit the number of children."

"When I heard the family planning message, I told my husband about it. He told me to go to the hospital to inquire more about family planning. When I went, they gave me some information and also recommended the pill that I am currently using."

But the story is not always this easy or pleasant. Some of the contentions confirmed the common assumption that some women who would use contraceptives fail to do so because of their husbands' opposition. For instance, one woman claimed:

"I told my husband about a family planning program I watched and he told me to seek more information about family planning. At that time, the family planning people would not attend to a client if the husband did not accompany her. When I told him that they would not attend to me unless he went with me, he refused, saying that he would never go there. That was how the matter ended."

A similar case was reported as follows:

"I actually watched the family planning show with my husband and we discussed the message. He insisted that he would never support my obtaining a family planning method because once a woman does it, she becomes promiscuous and uncontrollable."

Some women, however, remain strongly convinced that they need to do something about their reproduction and sometimes do so without the husband's consent and knowledge. The statement below shows how a woman did it without her husband's consent when forced to:

"After watching a family planning program, I told my husband that I wanted to obtain a family planning method. He refused to support it, complaining that it enables women to engage in extramarital sex. Even after making him realize that I could get pregnant when we did not want it, he still would not agree. Unfortunately, I got pregnant that very month. After having the baby I raised the issue again, but he still refused to support it. I then went to the hospital without his knowledge and I was told I could do it without his consent as long as I do not use it to cheat on him. That was how I did it secretly, and he never said anything since then."

Temporal Order of Exposure to Family Planning Messages and Contraceptive Use:

With the knowledge of the prevalence of exposure to family planning messages and contraceptive use among the participants, the discussion shifted to putting the two events into perspective regarding time. In other words, we examined which of the two events—exposure to family planning messages or contraceptive use—occurred first. This was done in two ways. First, we discussed the actual experiences of participants who had heard or seen family planning messages in the media and who had used any method of family planning. Second, we examined the issue based on what the participants perceived to be the prevailing situation in the society.

With regard to actual experiences, 7 of the 15 eligible participants had heard or watched family planning messages before adopting contraception, and the remaining 8 had already used contraceptives before being exposed to family planning messages. The experiences of the women differed by age and location. Whereas the older women in both locations tended to be exposed to family planning messages before using any method, the younger ones tended to have used contraceptives before being exposed to family planning messages. Similarly, the women in the Ikire groups tended to have been using methods of family planning before being exposed to family planning messages; those in the Erunmu groups tended to have heard or seen family planning messages before adopting contraception. The evidence from the study confirms the problem of establishing any causal relationship when the temporal order of the two events could not be determined. Although a very small sample is involved, the report of the actual experiences of the focus group participants shows that both scenarios are about equally likely. Exposure to family planning messages may influence a woman to adopt family planning, but a woman who is using or has used a method may also be more inclined to listen to or watch a family planning program.

The discussion of the perception of the participants about the prevailing situation with respect to the timing of the two events gave a slightly different impression. As would be expected, there were arguments in support of both possibilities, but the prevailing argument was that women are more likely to have used methods of birth control before being exposed to family planning messages in the media. This position was held more strongly by the older women in both study locations. Arguing for those who believed that women tend to be exposed to media messages before using contraceptives, one woman declared:

"Those who heard or saw family planning messages before using are more than those who used birth control methods before exposure to the messages. Before the airing of family planning campaigns in the media, those who were using contraceptives were very few and were very secretive about it."

Supporting this claim, another participant noted:

"It was common then among students, because they learned about it in the school, and older women who went to herbalists for the traditional methods. But no one wants to go to herbalists, so when the government came out with the modern system we began to know more about it and to use it."

The opposing view, i.e., that women have been using family planning methods before being exposed to family planning messages in the media, was more popular among the younger women, especially those in Ikire. Those who held this view argued that contraceptive usage had been in existence in the society long before the introduction of family planning campaigns in the media. One woman observed that:

"Women have been using family planning methods before they began to hear or watch family planning messages in the media. Not that they were using it for stopping childbearing, but they have been using it for spacing births long before the media promotion of family planning."

Similarly, another participant argued that if women were not using birth control methods before hearing or watching family planning messages in the media, they would have been getting pregnant before they became exposed to the messages.

The above findings on the timing of exposure to family planning messages in the mass media and contraceptive behavior, based on the actual experiences of the participants as well as their perception of the prevailing situation, do not give a convincing indication of the direction of the relationship. But the discussion is useful to the extent that it suggests the perceived direction of the association by women themselves. Furthermore, the perception of the participants supports the more dominant educated guess that exposure to family planning messages in the media is more likely to be the *cause* and contraceptive use the *effect*. Nevertheless, the argument that the reverse may be the case remains valid.

Discussion and Conclusion

The main focus of this paper is the relationship between exposure to media promotion of family planning and reproductive preferences and behavior. In the last two sections, we have analyzed this relationship by examining both the *gross* and the *net* effects of exposure to media messages on six indicators of reproductive behavior. The evidence presented from the quantitative and qualitative data clearly indicates that media advertisement of family planning is positively associated with contraceptive use and the tendency to desire fewer children.

We recognize the limitations of the data, which preclude any claim to a clear-cut inference about the causal direction of the relationship. This involves the problem of selectivity associated with the absence of any measured time sequence in the occurrence of the exposure variable and the indicators of reproductive behavior. Thus, women who are more favorable toward contraceptive practice and fewer children may be those who are more disposed to recall having heard or seen a family planning message in the media. Indeed, they may be more disposed to actually listening to or watching the message. Evidence from the focus group discussions indicates that this potential problem is real and should be a matter of concern for studies of this nature.

Despite the above limitation, the association found between the media promotion of family planning and reproductive behavior cannot be ignored. The results presented above are quite similar to the results for some other countries (e.g., Kenya and Ghana). Furthermore, evidence from evaluations of many family planning campaign programs in Nigeria that do have a *before* and *after* design suggests that exposure to media messages is likely to be the cause rather the effect (Piotrow et al., 1990; FHS, 1992). Also consistent with this position is the observation that contraceptive knowledge and use in Nigeria increased quite rapidly following the adoption of the national population policy (Caldwell et al., 1992). Public awareness of the policy derives largely from media programs aimed at promoting its goals and achieving its objectives. One of these objectives is "to make family planning means and services easily accessible to all couples and individuals at affordable cost, at the earliest possible time, to enable them to regulate their fertility" (Federal Ministry of Health, 1988: 14).

In conclusion, this piece of research provides evidence that the use of media to promote family planning is yielding the desired result in Nigeria. Though the data are not the best for this type of analysis, the findings are consistent with the reports of various studies that have been used to evaluate the impact of family planning campaigns in various parts of the country. The national orientation of the NDHS and its large sample size allows for better generalization of the findings than is possible from results that derive from the smaller surveys. Therefore, we suggest that programs using mass media for promoting family planning should be continued. Nevertheless, there is a need for continued evaluation of the impact of the programs using appropriate data. Experimental studies in the form of the *before* and *after* designs should be intensified.

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