

Does Family Planning Messages Exposure in the Preceding 12 Months Period Predict the Current Use of a Modern Family Planning Method among Women of Reproductive Age in Nigeria?

Olalekan Seun Olagunju^{1,3}, Bolarinwa Afolabi Obasanjo^{2,3,*}, Erinfolami Peter Temitope^{1,3}, Ogunmola Saliu^{1,3}, Ibinaiye Taiwo^{1,4}, Zakirai Musa^{1,5}, Elizabeth Omoluabi¹, Tesleem Kayode Babalola²

¹Centre for Research Evaluation, Resources and Development (CRERD), Ile-Ife, Nigeria

²Department of Public Health, School of Nursing and Public Health, University of KwaZulu-Natal, Durban, South Africa

³Department of Demography and Social Statistics, Faculty of Social Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria

⁴Malaria Consortium, Nigeria

⁵National Population Commission Nigeria

*Corresponding author: bolarinwaobasanjo@gmail.com

Received May 03, 2020; Revised June 05, 2020; Accepted June 12, 2020

Abstract This study examined how exposure to Family Planning (FP) information can influence modern contraceptive use among women of reproductive age in Nigeria. The study used a secondary dataset from the PMA2020/NGR4 conducted in 2017. A total of 11,380 females were interviewed, which is the sample size for this study. Data analysis included Univariate, Bivariate, and Multivariate techniques. Bivariate analysis findings showed that exposure to FP information was higher among those who know a place to obtain FP services. However, other exposure such as via radio, television, newspapers, told at the health facility are also significantly associated with the modern use of FP in Nigeria (p-value <0.05). Binary logistic regression showed that women who heard FP information on the radio were 0.23 times as likely to report using contraception compared to those who did not. To improve family planning use various ways of conveying family planning messages should be encouraged because multiple information sources on contraception help retain the message better and extend the reach of the campaign on family planning use.

Keywords: family planning message, modern contraceptives, contraceptive use, Nigeria

Cite This Article: Olalekan Seun Olagunju, Bolarinwa Afolabi Obasanjo, Erinfolami Peter Temitope, Ogunmola Saliu, Ibinaiye Taiwo, Zakirai Musa, Elizabeth Omoluabi, and Tesleem Kayode Babalola, "Does Family Planning Messages Exposure in the Preceding 12 Months Period Predict the Current Use of a Modern Family Planning Method among Women of Reproductive Age in Nigeria?" *American Journal of Public Health Research*, vol. 8, no. 3 (2020): 100-104. doi: 10.12691/ajphr-8-3-4.

1. Introduction

The increase in contraceptives use has presented to the user an ability to choose the number and spacing of children with various remarkable lifesaving benefits [1,2]. The benefits witnessed over the years include the prompt reduction of maternal deaths, infant and child death, teenage pregnancy, Sexually Transmitted Infections (STIs), etc. The government is focused on combating poverty and achieving a range of health and development goals, such as those outlined in the United Nations' Sustainable Development Goals (SDGs) [3], all of which are linked to Family planning in one way or the other. Despite these impressive gains, the use of contraception is still very low in Nigeria because only 15% of women in the reproductive age adopt a modern

family planning method currently [4,5]. Meanwhile, the low use of contraceptives in Nigeria can be attributed to several factors. Family planning messages exposure is one of those factors. Mass media plays a vital role in promoting family planning programs, and the various medium is used such as radio, television, posters, movies, newspapers and interpersonal communications such as individual patient education and counseling group meetings, etc. [6,7].

Previous studies on family planning messages exposure confirmed the importance of mass media in promoting family planning programs mainly because of the coverage primarily electronic media like radio has a network reaching thousands of people and television, which is a common household asset in Nigeria [4,8].

Even with adequate exposure to information on messages via mass media, the contraceptive prevalence rate is still low in Nigeria [9,10]. Therefore, the

relationship between these two gives room for more critical examination because, with the reported high level of awareness in some previous studies, prevalence seems not to conform [9,11]. Hence, this paper analyzed the relationship between family planning messages exposure in the preceding 12-month period and the current use of a modern family planning method.

The question of interest is that if potential users were reached by any means, is there an added advantage to the use of family planning methods? Thus, this paper sought to examine the pattern of modern contraceptive use among women of reproductive age in Nigeria; also, to determine the effect of family planning information acquired through various media in the past 12 months on the current modern family planning method users.

2. Materials and Methods

2.1. Study Design

Secondary data was used for this study, and the dataset was extracted from the Performance Monitoring and Accountability (PMA2020) conducted in the 2017 dataset. PMA was a survey was a cross-sectional survey carried out in seven states of Nigeria, which are Anambra State, Kano State, Kaduna State, Lagos State, Nasarawa State, Rivers State, and Taraba State. Data collection was conducted between April and May 2017.

2.2. Study Setting

Nigeria is a country in West Africa. Nigeria shares land borders with the Republic of Benin in the west, Chad and Cameroon in the east, and Niger in the North. Nigeria is the most populous African country, with a population of over 182 million in 2015, is nearly equally divided between Christianity and Islam, though the exact ratio is uncertain.

2.3. Study Population

The study population emanated from the PMA 2020/NGR4 secondary dataset. The use of local enumerators that are familiar with the survey area was used. A multistage sampling technique was adopted in the selection of the Enumeration Areas (EAs) from each Local Government (LG) of the selected states and all women of reproductive age between 15 to 49 years living in the selected households within the EAs were given a questionnaire to collect respondent background information, family planning messages exposure via mass media, use of modern contraceptive and a total of 11,380 respondents were interviewed, which is the sample size for this study.

2.4. Source of Data and Measurements

To predict family planning messages exposure in the preceding 12-month period on the current modern family planning method users, a secondary dataset from PMA conducted in 2017 was used for the study and the following variables were extracted:

2.4.1. Outcome Variable

The outcome variable in this study was the current use of a family planning method, which was coded as yes or no. Yes, for those that are currently using a method of contraceptive and No for those that are not using.

2.4.2. Independent Variables

The explanatory variables in this study include:

Heard about family planning on the radio: This variable was measured as yes or no. "Yes" if the respondent heard family planning messages on radio and "No" if the respondent did not.

Heard about family planning on television: This variable was measured as yes or no. "Yes" if the respondent watches family planning messages on television and "No" if the respondent did not.

Read about family planning on magazine/newspaper: This variable was measured as "Yes" or "No." "Yes" if the respondent read about family planning messages inside magazine/newspaper and "No" if the respondent did not.

Received call or text about family planning on mobile phone: This variable was measured as "Yes" or "No." "Yes" if the respondent received a call or text about family planning on mobile phone and "No" if the respondent did not.

Read about family planning in a brochure, leaflet, or flyers: This variable was measured as "Yes" or "No." "Yes" if the respondent read about family planning in a brochure, leaflet, or flyers and "No" if the respondent did not.

Seen a poster or billboard with a family planning message: This variable was measured as "Yes" or "No." "Yes" if the respondent saw a poster or billboard with a family planning message and "No" if the respondent did not.

Talk to about family planning at a health facility: This variable was measured as yes or no. "Yes," if the respondent was told about family planning at the health facility and "No" if the respondent did not.

Know a place to obtain family planning: This variable was measured as "Yes" or "No." "Yes," if the respondent knows a place to obtain family planning and "No" if the respondent did not.

Visited by a health worker about family planning in the last 12 months: This variable was measured as "Yes" or "No." "Yes" if the respondent was visited by a health worker about family planning in the last 12 months and "No" if the respondent did not.

Talked to about family planning at a health facility: This variable was measured as "Yes" or "No." "Yes" if the respondent discussed family planning at a health facility in the last 12 months and "No" if the respondent did not.

Attend a community event where family planning was favored: This variable was measured as "Yes" or "No." "Yes," if the respondent attended a community event where family planning was favored in the last 12 months and "No" if the respondent did not.

2.4.3. Data Analysis

The analysis was performed with Stata 14 software. The data was analyzed using univariate, bivariate, and multivariate measures. Univariate analysis was based on the frequency distribution of a selected variable that is

related to this study in the dataset. Bivariate analysis was employed in other to show the association between family planning messages exposure and modern family planning method users. A chi-square test was used to illustrate this association. Lastly, multivariate analysis was employed to predict exposure to family planning in the preceding 12-month period on the current use of the modern family planning method. Logistic regression was used to achieve this objective.

3. Results

Table 1. Frequency Distribution of Characteristics of Respondents

Variable	Percent (N=11380)
Age	
15-19	19.6
20-34	51.7
35-49	28.7
Mean (SD)	29 (9.1)
Age at first sex	
Never	21.8
<18	39.9
18 and above	38.3
Mean (SD)	17 (3.8)
Place of residence	
Urban	55.7
Rural	44.3
Level of education	
Never	17.5
Primary	17.3
Secondary	46.4
Higher	18.8
Wealth index	
Lower	43.7
Middle	18.8
Higher	37.5
Religion	
Christian	59.2
Islam	39.2
Traditional	0.6
Others	1.0
Marital status	
Currently married	62.1
Currently living with a partner	2.8
Divorced or separated	4.8
Never	30.3
Ever given birth	
No	33.6
Yes	66.4

Table 1 shows the frequency distribution of characteristics of respondents, and it was observed that more than half of the respondents (52%) were between the ages 20-34 years with a mean age of 29 years. The mean age at first sex for women was 17 years, with about 40% of women had their first sex before 18 years. More

than half (56%) reside in urban areas. On the level of education, the table revealed that more than half (65%) have secondary or higher education. About 38% were from rich households. Respondent's religion showed that only 0.6% were affiliated with traditional practice compared to 59% for Christian and 39% for Islam. About 62% of respondents were currently married, and more than 65% reported that they had given birth before the survey.

Table 2. Family planning message exposure

Variable	Percent (N=11380)
Know a place to obtain a method of FP	
No	41.4
Yes	58.6
Health worker visited about FP	
No	87.8
Yes	12.2
Had FP discussion at the health facility	
No	56.1
Yes	43.9
Attended a community event	
No	89.1
Yes	10.9
Heard of FP on Radio	
No	41.4
Yes	58.6
Heard of FP on television	
No	58.3
Yes	41.7
Read about FP in newspaper/magazine	
No	79.2
Yes	20.8
Received call or text about FP	
No	90.1
Yes	9.9
Read about FP in a brochure, leaflet or flyers	
No	83.5
Yes	16.5
Seen a poster or billboard with a FP message	
No	70.1
Yes	29.9

Table 2 present the family planning messages exposure. The table shows that about 59% of respondents know the place to obtain a method of family planning. Health workers visited only 12% of respondents. About 44% participated in family planning discussions at the health facility. Fewer than 11% of the respondent attended a community event where family planning was favored. Media exposure shows that more than half 59% had family planning messages on radio, 42% had it on television, 21% read it in newspaper/magazine, 17% learned about it in a brochure, leaflet or flyers, and 30% saw it in a poster or billboard. Only 10% received a call or text message about family planning on their mobile phone.

Table 3. Proportion of Current User of Modern Contraceptive and Family Planning message exposure

Variable	Use of modern contraceptive Yes (%)
Know a place to obtain a method of FP	
No	0.01*
Yes	0.03*
Health worker visited about FP	
No	13.5*
Yes	26.1*
Had FP discussion at the health facility	
No	11.3*
Yes	25.0*
Attended a community event	
No	14.0*
Yes	26.5*
Heard of FP on Radio	
No	11.1*
Yes	17.6*
Heard of FP on television	
No	10.1*
Yes	22.4*
Read about FP in newspaper/magazine	
No	13.5*
Yes	22.5*
Received call or text about FP	
No	14.1*
Yes	26.8*
Read about FP in a brochure, leaflet or flyers	
No	13.3*
Yes	25.4*
Seen a poster or billboard with a FP message	
No	11.8*
Yes	22.9*

*Significance level ($\alpha=0.05$).

The proportion of respondents who were using modern contraceptives preceding the surveys in each category and the chi-square test for family planning messages exposure is presented in Table 3. In all, Known a place to obtain a method of family planning, visited by health worker about family planning, discussed family planning at the health facility, attended a community event where family planning was favored, received a call or text message about family planning on a mobile phone, had family planning message exposure on radio, television, newspaper/magazine, brochure, leaflet or flyers, and poster or billboard are associated with the modern use of a family planning method and these are statistically significant in this study ($p\text{-value} < 0.05$). Across categories, the table shows that more women who were exposed to the message using a modern method of family planning compare to those that are not exposed to the messages.

Table 4. Binary Logistic Regression Analysis of Family Planning message exposure and Current use of any Modern Method of Family Planning

Variable	Use of modern contraceptive		
	Odd ratio	P-value	CI (95%)
Know a place to obtain a method of FP (RC =No)			
Yes	0.77	0.72	0.19 – 3.19
Health worker visited about FP (RC =No)			
Yes	0.81	0.81	0.15 – 4.51
Talked to about FP at a health facility (RC =No)			
Yes	0.88	0.86	0.21 – 0.368
Attended a community event (RC =No)			
Yes	3.79	0.06	0.94 - 15.21
Heard of FP on Radio (RC =No)			
Yes	0.23	0.04*	0.06 – 0.95
Heard of FP on television (RC =No)			
Yes	4.68	0.07	0.91 – 24.16
Read about FP in newspaper/magazine (RC =No)			
Yes	0.84	0.83	0.16 – 4.34
Received call or text about FP (RC =No)			
Yes	2.51	0.25	0.53 – 11.86
Read about FP in a brochure, leaflet or flyers (RC =No)			
Yes	0.47	0.43	0.07 – 3.03
Seen a poster or billboard with a FP message (RC =No)			
Yes	2.50	0.21	0.59 – 10.54

* Significance level ($\alpha=0.05$).

Table 4 shows the binary logistic regression analysis of family planning messages exposure in the last 12 months on those that are currently using a modern method of family planning. The table showed that women who know a place to obtain a method of family planning, visited by health worker about family planning, talked to about family planning at the health facility, heard about family planning on radio, read about family planning in newspaper/magazine and read about family planning in a brochure, leaflet or flyers are less likely to use a modern method of family planning. Only family planning messages exposure on the radio is statistically significant ($OR=0.23, p<0.05$).

The table also revealed that women who attended a community even favored by family planning, exposed to family planning on television and poster or billboard, and women who received call or text about family planning on the mobile phone are more likely to use a modern method of family planning. Still, none are statistically significant in this study ($p<0.05$). The significance of this relationship was tested by examining the p-value corresponding to the estimated odds ratios, with the p-value set at a 95% significance level ($\alpha=0.05$).

4. Discussion

The percentage of young women that are using modern contraceptive preceding the survey was quite

low (15%). Across categories, known a place to obtain a method of family planning, visited by health worker about family planning, discussed family planning at the health facility, attended a community event where family planning was favored, received a call or text message about family planning on the mobile phone, family planning message exposure on radio, television, newspaper/magazine, brochure, leaflet or flyers, and poster or billboard are associated with the modern use of a family planning method. Results from logistic regression showed that only family planning messages exposure on the radio is statistically significant in predicting the use of a modern method of family planning among women in Nigeria.

This study analyzed family planning messages exposure in the preceding 12-month period and use of a modern family planning method among women of reproductive age in Nigeria using Performance Monitoring and Accountability recent survey datasets (PMA2017/NGR4). Arising from the findings, it is evident that the modern family planning methods use among women in Nigeria are still low, indicating that more women who are sexually active were not using, which is like findings from other studies [12,13,14].

The analyses suggested that the radio had been the most common source of spreading family planning messages compared to other sources. This confirms previous findings on family planning messages exposure [15,16].

The proportions of information about family planning acquired on most of the media channels were considerably low, especially for those that were acquired on televisions, newspapers or magazines, and those that were acquired by word of mouth at the health facility. Also, it is found out that family planning messages exposure in the community event, on television, received calls or text about FP and poster or billboard with a FP message were a good predictor of the current use of the contraceptive method.

5. Conclusion

We concluded that various ways of conveying family planning messages should be encouraged because multiple sources of information on contraception help reinforce the message better and extend the reach of the family planning campaign. Complementary messages may help to create an environment where the practice of contraception is perceived as a social norm. Varied sources should continue to be used to promote family planning and other reproductive health issues. Also, more behavioral change informative programs directed at the importance of using modern contraception should be adopted by the government.

Acknowledgments

The authors declare that there is no conflict of interest. This research received no specific grant from any funding agency in public, commercial, or not-for-profit sectors.

References

- [1] Tekelab, T., A.S. Melka, and D. Wirtu, Predictors of modern contraceptive methods use among married women of reproductive age groups in Western Ethiopia: a community based cross-sectional study. *BMC women's health*, 2015. 15(1): p. 52.
- [2] Nasr E, Hassan H. Association between quality of family planning services and client's satisfaction level in maternal and child health centers in Port Said city. *Journal of Nursing Education and Practice*. 2016; 6(1): 85-99.
- [3] United Nations Statistics Division, Department of Economic and Social Affairs., *The sustainable development goals report 2018*, UN, New York. 2018.
- [4] Commission, N.P., [Nigeria] and ICF International (2014) *Nigeria Demographic and Health Survey 2013*. NPC and ICF International, Abuja, Nigeria, and Rockville, Maryland, USA.
- [5] Bill and Melinda Gate Institute for Population and Reproductive Health, *Performance Monitoring and Accountability 2020 (PMA2020) Project*. Baltimore, MD. Johns Hopkins Bloomberg School of Public Health., 2018.
- [6] Muttreja, P. and S. Singh, Family planning in India: The way forward. *The Indian journal of medical research*, 2018. 148 (Suppl 1): p. S1.
- [7] Konkor, I., et al., Exposure to mass media family planning messages among post-delivery women in Nigeria: testing the structural influence model of health communication. *The European Journal of Contraception & Reproductive Health Care*, 2019. 24(1): p. 18-23.
- [8] Kabir, M. and M.A. Islam, The impact of mass media family planning programmes on current use of contraception in urban Bangladesh. *Journal of biosocial science*, 2000. 32(3): p. 411-419.
- [9] Ajaero, C.K., et al., Access to mass media messages, and use of family planning in Nigeria: a spatio-demographic analysis from the 2013 DHS. *BMC public health*, 2016. 16(1): p. 427.
- [10] Ajala, A., *Mass Media Exposure and Intention to use Contraceptives in North-west Geo-political Zone, Nigeria*. *Developing Countries Studies*, 2015. 4: p. 24.
- [11] Babalola, S. and O. Oyenubi, *Factors explaining the North-South differentials in contraceptive use in Nigeria: A nonlinear decomposition analysis*. *Demographic Research*, 2018. 38: p. 287-308.
- [12] Peer, N., N. Morojele, and L. London, *Factors associated with contraceptive use in a rural area in Western Cape Province*. *South African Medical Journal*, 2013. 103(6): p. 406-412.
- [13] Tsui, A.O., W. Brown, and Q. Li, *Contraceptive practice in sub-Saharan Africa*. *Population and development review*, 2017. 43(Suppl Suppl 1): p. 166.
- [14] Seutlwadi, L., et al., *Contraceptive use and associated factors among South African youth (18-24 years): A population-based survey*. *South African Journal of Obstetrics and Gynaecology*, 2012. 18(2).
- [15] Odewale, B.J., M. Oladosun, and E.O. Amoo, *Multiple exposure to information about family planning and contraceptive use among women in Nigeria*. 2016.
- [16] Ardiansyah, B., *Effect of Mass Media on Family Planning Choices in Indonesia*. 2016.

