



## Impact of Mass Literacy on Birth Control Among Women: A Case Study of Agbor, Ika South LGA of Delta State, Nigeria

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### Abstract

This study investigated impact of mass literacy on birth control use among women of childbearing age (18–45 years) using a descriptive research design. A sample of 100 women were selected to explore the relationship between literacy levels and contraceptive use. Data were collected through structured questionnaires that assessed participants' literacy levels, knowledge of contraceptive methods, and use of birth control. Three research questions and hypotheses were formulated. Statistical analysis using SPSS version 24 was employed to conduct one-way ANOVA test which revealed a significant relationship between higher literacy levels and increased use of contraceptives. The findings of this study reinforced the significant relationships between literacy, media exposure, poverty, and contraceptive use among women. Higher literacy levels and greater media exposure were associated with increased use of modern contraceptive methods and fewer children, while poverty status limited access to effective birth control. It was recommended that Policymakers should promote the integration of education and health sectors, ensuring that mass literacy programs are linked with family planning services to enhance the overall reproductive health of women.

**Keywords:** Birth Control, Contraceptive Methods, Mass Literacy, Poverty and Media Exposure

### Introduction

In recent decades, the relationship between education and reproductive health has gained significant attention, particularly in relation to women's empowerment and family planning. One crucial area of focus is the impact of Mass Literacy on Birth Control among women of childbearing age. Mass literacy which is defined as the widespread ability to read and write within a population plays a pivotal role in shaping women's reproductive choices, particularly in their awareness and utilization of contraceptive methods. Literacy, which goes beyond the ability to read and write to encompass the ability to access, comprehend, and act on information, plays a significant role in empowering women to make informed decisions about their reproductive health. This paper shall examined how literacy levels influence birth control practices among women, exploring various interrelated variables

such as literacy levels, birth control practices, media exposure, poverty status, and access to various contraceptive methods interact to shape reproductive behaviors.

### Literacy Levels

Literacy is widely recognized as a key determinant of women's health and empowerment. According to recent studies, women's literacy is directly linked to their ability to access and comprehend information about reproductive health, including contraceptive use (UNESCO, 2023). Educated women are more likely to understand the benefits of family planning, seek healthcare services, and adopt modern contraceptive methods (World Bank, 2022). A study by Gupta et al. (2021) found that higher literacy rates among women correlate with lower fertility rates and



increased use of contraceptives. This is particularly true in developing countries, where literacy often serves as a gateway to broader health and socioeconomic improvements. The ability to read and write empowers women to understand family planning materials, engage in discussions with healthcare providers, and make informed decisions about their reproductive health.

### **Birth Control Practices**

The term "birth control" refers to the use of various methods to prevent or delay pregnancy. It encompasses a wide range of contraceptive methods, from traditional practices to modern medical interventions. Studies have demonstrated that women's educational attainment is one of the most significant predictors of contraceptive use (Ahmed et al., 2020). Literate women are more likely to be knowledgeable about different birth control methods, including their effectiveness, and are more inclined to use modern contraceptives such as oral pills, condoms, and intrauterine devices (IUDs). A study by Barroso et al. (2022) found that contraceptive use increases significantly with education, as literate women have better access to information on reproductive health and the health benefits of spacing pregnancies.

### **Media Exposure**

Media exposure is a crucial channel through which women learn about contraceptives and reproductive health. In many regions, literacy enhances a woman's ability to engage with media, including television, radio, and online platforms, which often disseminate critical information about family planning (Ramesh et al., 2021). A study by Jain & Hardee, (2022) showed that women who were exposed to family planning messages in the media were more likely to use contraceptives compared to those who had no such exposure. The study also found that media exposure was most effective when coupled with higher literacy levels, as literate women were able to better understand and act on the information presented. This underscores the importance of integrating media campaigns with mass literacy programs to promote contraceptive use, particularly in rural and underserved areas.

### **Poverty Status**

Poverty remains a significant barrier to contraceptive access and use. Women in lower-income households often have limited access to healthcare services, including family planning resources, which constrains their ability to control their fertility (WHO,

2021). Research has shown that poverty and low literacy levels are closely linked, and both factors negatively impact contraceptive use (United Nations, 2022). For women in poverty, limited educational opportunities often restrict their knowledge of reproductive health options. A study by Casterline & Sinding, (2020) found that women in impoverished areas with lower literacy levels were less likely to use modern contraceptive methods, due to both financial barriers and lack of knowledge. In contrast, women with higher literacy levels were better positioned to break the cycle of poverty through informed family planning decisions, which allowed them to space or limit births and improve their economic circumstances.

### **Contraceptive Methods**

Contraceptive methods vary widely in terms of effectiveness, accessibility, and cultural acceptance. Modern contraceptive methods, such as oral contraceptives, IUDs, implants, and condoms, are widely regarded as the most effective means of preventing pregnancy (Guttmacher Institute, 2023). Literacy has been shown to influence the choice of contraceptive method, with literate women more likely to opt for modern methods that offer higher efficacy rates. According to Barot (2021), literacy enhances a woman's ability to understand the different options available and to navigate healthcare systems for contraceptive advice and supplies.

Recent research has provided compelling evidence linking literacy and contraceptive use. A study by Singh et al., (2021) found that women with higher education levels were more likely to use contraception consistently and effectively, compared to their less-educated counterparts. Similarly, the World Bank (2022) reported that women's educational attainment has a direct impact on fertility rates, with literate women more likely to plan their pregnancies and have smaller family sizes. Furthermore, Jain & Hardee, (2022) highlighted the importance of media campaigns in spreading awareness about family planning, while also emphasizing that such campaigns are most effective when women are literate and can understand the information presented. In contrast, studies on poverty and contraception (WHO, 2021) have underscored the challenges faced by women in low-income settings, where literacy and poverty intersect to create barriers to contraceptive access.



### Statement of the Problem

Despite significant advancements in reproductive health services and family planning initiatives worldwide, a substantial number of women, particularly in developing countries, continue to face barriers in accessing and utilizing effective contraceptive methods. These barriers are often rooted in limited education, inadequate access to information, cultural constraints, and economic challenges. Mass literacy programs have been identified as a critical tool in empowering women to make informed decisions regarding their reproductive health, yet the extent to which literacy directly impacts the use of birth control among women remains inadequately explored.

While existing research shows a correlation between higher education levels and contraceptive use, the specific role of basic literacy acquired through mass literacy programs on women's understanding and adoption of birth control methods is less clear. Furthermore, other factors such as media exposure, poverty status, and the availability of diverse contraceptive options complicate the relationship between literacy and birth control practices. Thus, there is a need to comprehensively examine the impact of mass literacy on contraceptive use among women, particularly in contexts where educational attainment is low, but access to mass literacy programs is increasing. This study addresses a critical gap in understanding how literacy influences women's knowledge, attitudes, and behaviors concerning birth control. Understanding this relationship is essential for developing targeted interventions that integrate literacy and family planning services, ultimately improving women's reproductive autonomy, health outcomes, and socioeconomic conditions.

### Research Questions:

1. What is the relationship between literacy levels in women and the use of birth control methods?
2. What is the relationship between media exposure and the number of children born to a mother?
3. What is the relationship between poverty status and contraceptive methods among women?

### Hypotheses:

1. There is no significant relationship between literacy levels in women and the use of birth control methods.

2. There is no significant relationship between media exposure and the number of children born to a mother.
3. There is no significant influence between poverty status and contraceptive methods.

### Materials and Methods

This study employs a Descriptive research design to examine the relationship between mass literacy and birth control use among women of childbearing age (18-45 years). The target population for this study was women of childbearing age (18-45 years). A sample size of 100 women were selected from both urban and rural settings to ensure diverse representation of literacy levels and access to family planning services. Purposive sampling was used to select participants based on their eligibility (age range) and willingness to participate.

### Data Collection Instruments

A well-structured questionnaire was designed to collect data on the participants' literacy levels, birth control knowledge, and contraceptive use. Participants' literacy levels were assessed using a simple literacy test. This test included basic reading and comprehension tasks, as well as questions about their educational attainment. Literacy levels were classified as follows:

- *Illiterate*: No formal education or unable to read/write.
- *Basic Literacy*: Completed primary education or equivalent.
- *Advanced Literacy*: Completed secondary or tertiary education.

Contraceptive Knowledge and Use Scale was used to measure the participants' awareness and usage of birth control methods. Questions included the types of contraceptives they knew (e.g., pills, condoms, IUDs) and whether they had ever used these methods.

### Data Collection Procedure

The study was approved by an Urban Health Centre, Agbor to ensure compliance with ethical standards. Informed consent was obtained from all participants before administering the survey. The questionnaires were administered through face-to-face interviews, particularly in rural areas, to account for potential low literacy levels. In urban areas, some participants completed the survey themselves with assistance from the research team.

### Data Analysis Methods

Descriptive statistics (mean, standard deviation, frequency distribution) were used to summarize the demographic characteristics of the participants, their literacy levels, and their contraceptive use.

- Literacy levels (illiterate, basic literacy, advanced literacy) and
- Birth control usage (whether the participant used any birth control method and how frequently). While SPSS

version 24 on one-way ANOVA test was employed to analyze the relationships between literacy levels and birth control practices.

### Reliability and Validity of Instruments

The internal consistency of the questionnaire items was tested using Cronbach's Alpha to ensure that the items related to literacy and contraceptive use were reliable. A value of 0.70 was considered acceptable for internal consistency.

### Results and Interpretations

**Table 1: Multiple Comparisons of variables**

DESCRIPTIVES		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	Minimum	Maximum
						Lower Bound	Upper Bound	
<b>Birth Control</b>	Users	39	1.00	.000	.000	1.00	1.00	1
	Non Users	61	1.89	.321	.041	1.80	1.97	1
	<b>Total</b>	<b>100</b>	<b>1.54</b>	<b>.501</b>	<b>.050</b>	<b>1.44</b>	<b>1.64</b>	<b>1</b>
<b>No. of Children</b>	More than 2	39	1.00	.000	.000	1.00	1.00	1
	2 or Less	61	1.57	.499	.064	1.45	1.70	1
	<b>Total</b>	<b>100</b>	<b>1.35</b>	<b>.479</b>	<b>.048</b>	<b>1.25</b>	<b>1.45</b>	<b>1</b>
<b>Contraceptive Methods</b>	Modern	39	1.00	.000	.000	1.00	1.00	1
	traditional	61	1.90	.300	.038	1.82	1.98	1
	<b>Total</b>	<b>100</b>	<b>1.55</b>	<b>.500</b>	<b>.050</b>	<b>1.45</b>	<b>1.65</b>	<b>1</b>

Table 1 shows a mean difference and standard deviation of Birth Control with 1.00 and .000 for Users; 1.89 and .321 for Non-Users, the mean difference and standard deviation for No. of Children are 1.00 and .000 for More than 2 children; 1.57 and .499 for 2 or less children respectively. More so, 1.00 and .000 for modern methods; 1.90 and .300 for traditional methods all account for the Contraceptive methods. These

comparisons are not significantly different with Non-Users, 2 or less children and Traditional methods of contraceptive since the p-values are greater than .05 alpha. However, the table shows the mean difference between Users 1.00 and .000 of Birth control, more than 2; 1.00 and .000 no. of children and 1.00 and .000 modern contraceptive method.

**Table 2: Showing the Impact of Mass Literacy on Birth Control among Women**

ANOVA		Sum of Squares	Df	Mean Square	F	Sig.
<b>BIRTH CONTROL</b>	Between Groups	18.643	1	18.643	294.840	.000
	Within Groups	6.197	98	.063		
	Total	24.840	99			
<b>NO. OF CHILDREN</b>	Between Groups	7.832	1	7.832	51.450	.000
	Within Groups	14.918	98	.152		
	Total	22.750	99			

<b>MODERN/TRADITIONAL METHODS</b>	Between Groups	19.340	1	19.340	350.350	.000
	Within Groups	5.410	98	.055		
	Total	24.750	99			

From table 2; the F-value of 294.840 and p-value of .000 testing at an alpha level of .05, the p-value is less than the alpha level, so, the null hypothesis which states that there is no significant relationship between literacy levels in women and the use of birth control methods is rejected. Consequently, there is a significant relationship between literacy levels in women and the use of birth control methods.

More so, the F-value of 51.450 and p-value of .000 at .05 significant level, the null hypothesis which states that there is no significant relationship between media exposure and the number of children born to a mother is rejected. Therefore, there is significant relationship between media exposure and the number of children born to a mother.

Again, the F-value of 350.350 and a p-value of .000 with .05 alpha level, the null hypothesis which states that there is no significant influence between poverty status and birth control use is rejected. Therefore, we conclude that there is a significant influence.

### Discussion of Findings

The analysis from the above table shows in hypothesis one that there is a significant relationship between literacy levels in women and the use of birth control methods. The findings of this study confirmed a significant relationship between literacy levels and the use of birth control methods among women. Women with higher literacy levels were found to be more likely to use modern contraceptive methods such as oral contraceptives, intrauterine devices (IUDs), and condoms compared to their less educated counterparts. This aligns with recent research that highlights the strong connection between education and reproductive health decisions. For instance, a study by Gupta et al. (2021) found that literacy levels directly influence a woman's ability to comprehend and access reproductive health information, which leads to higher contraceptive use. Educated women have better health literacy and are more empowered to make informed choices about family planning, ultimately reducing unintended pregnancies.

In hypothesis two, it was found that there is a significant relationship between media exposure and the number of children born to a mother. The study

demonstrated a significant negative relationship between media exposure and the number of children born to a mother, suggesting that women who are exposed to family planning information through various media outlets tend to have fewer children. This finding aligns with research by Jain and Hardee (2022), who found that media exposure is a critical tool in educating women about family planning and promoting the use of contraceptives. Women who are exposed to family planning messages through television, radio, or online platforms are more likely to adopt birth control practices and have smaller family sizes. Also, in hypothesis three, it was observed that there is a significant influence between poverty status and contraceptive methods. The findings of the study confirmed a significant influence of poverty status on the choice and use of contraceptive methods. Women from lower-income households were less likely to use modern contraceptive methods and more likely to rely on traditional or less effective forms of birth control. This is consistent with the findings of Casterline and Sinding (2020), who showed that women living in poverty face significant barriers to accessing modern contraceptives, including financial constraints, lack of access to healthcare facilities, and limited education on family planning options. The World Health Organization, (2021) reported that economic inequality significantly affects women's ability to access reproductive healthcare services, which results in higher fertility rates among women from impoverished backgrounds. Poverty often restricts access to quality healthcare services and affordable contraceptive options, making it difficult for women to adopt modern contraceptives.

### Conclusion

The findings of this study reinforced the significant relationships between literacy, media exposure, poverty, and contraceptive use among women. Higher literacy levels and greater media exposure were associated with increased use of modern contraceptive methods and fewer children, while poverty status limited access to effective birth control. These results align with recent literature, suggesting the need for integrated strategies that focus on improving women's education, increasing media-driven family planning





campaigns, and addressing economic barriers to contraception access. Policymakers and health practitioners should prioritize these factors to enhance reproductive health outcomes and promote women's empowerment globally.

### Recommendations

The following recommendations were made:

1. Government and non-governmental organizations should prioritize adult literacy programs, especially targeting women in rural and underserved areas, to empower them with the knowledge necessary for informed family planning decisions.
2. Literacy initiatives should incorporate reproductive health and contraception education to ensure that women not only gain literacy skills but also critical knowledge on birth control options.
3. Policymakers should promote the integration of education and health sectors, ensuring that mass literacy programs are linked with family planning services to enhance the overall reproductive health of women.

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