DOI: https://dx.doi.org/10.4314/gjss.v22i1.10

GLOBAL JOURNAL OF SOCIAL SCIENCES VOL 22, 2023: 107-118
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MEDIATING ROLE OF HEALTH LITERACY ON THE RELATIONSHIP BETWEEN EDUCATIONAL LEVEL AND CONTRACEPTIVE USE AMONG OLDER WOMEN IN UNIVERSITY OF NIGERIA NSUKKA, ENUGU STATE, NIGERIA

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(Received 13 March 2023, Revision Accepted 3 August 2023)

ABSTRACT

The issue of contraceptive use in Nigeria is still poor and has not reversed to an extent as it has been in other countries of sub-Sahara Africa, thus underscoring the importance of research investigating factors that moderate contraceptive use. In this current study, we investigated the mediating role of health literacy on the relationship between educational level and contraceptive use among older women in University of Nigeria, Nsukka (UNN).A cross-sectional study design was used to assess the moderating role of health literacy on contraceptive use among older women at the University of Nigeria, Nsukka. The Chinese version of Health Literacy Questionnaire (HLQ) was used to describe the health literacy profile of women and collect general information on older women in the university. Data were collected by researchers through face-to-face interviews. The 220 participants were selected using a convenient sampling method which is inexpensive and with fewer rules to follow. This allowed us to select participants that were easily accessible within the four faculties. The study employed a survey logistic regression which showed that there was a significant relationship between health literacy and contraceptive use. Education was not significantly related to contraceptive use buthealth literacy plays an important role in contraceptive use among older women in this high, minority population of women at the University of Nigeria, Nsukka.. Health literacy mediated the relationship between educational level and contraceptive use, showing that the association between educational level and contraceptive use was transmitted through health literacy. Educational interventions can help to increase the knowledge of available contraceptive methods and to use contraception more effectively.

KEYWORDS: Health literacy, Educational level, Contraceptive use, older women, Family planning

INTRODUCTION

Improving access to reproductive health is thus central to the process of development, as reflected in Sustainable Development Goal 3.7,2 which calls for universal access to family planning by 2030, and the Family Planning (FP) 2020 Initiative.3 (Jin, 2017). The FP2020 Initiative was launched in 2012to coordinate global efforts to expand access to family planning

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services. It is a partnership of countries, donors, researchers, and development organizations to accelerate action and address the most pressing reproductive health needs. Nigeria, the most populous black nation in Africa, has a current estimated population of 183 million, which is projected to reach 285 million by 2050 [United Nations, 2013]. The country's rapid population growth is attributable to a high total fertility rate of 5.5 children per woman [National population commission and ICF international, 2014]. Nigeria which is primarily rural and its highly gender-stratified cultures are very supportive of high fertility (Adebusoye, 2001).In response to a high annual rate of population (3.5%), the Nigerian Government put into effect a National population policy that called for a reduction in the birth rate through voluntary fertility regulation method compatible with Nations economic and social goals (FMH, 1988).

The contraceptive use reduces maternal mortality, prevents unwanted and highly risky pregnancies and the need for safe abortions and provides protection from sexually transmitted diseases (Olivera, et al, 2006). However, despite persistent advocacy urging the use of modern contraceptive methods for family planning, the fertility rate in most sub-Saharan African countries still remains unacceptably high (Audu, 2006), mostly due to poor uptake of contraceptives because of cultural, economic and political barriers. However, family planning is a major issue for many developing countries where poor maternal and child health care services are provided. Abegunde, et al, 2015; Navot, et al, 2015; Onaheim, et al, 2015. According to the most recent Demographic and Health Survey, rates of contraception in Nigeria have stagnated, remaining approximately 9% between 2008 and 2013. Though the contraceptive trend has not reversed, it is still concerning that contraceptive uptake is not increasing as it has been in other countries of sub-Saharan Africa, thus underscoring the importance of research investigating factors that influence contraceptive use. In this current study we investigated the association of health literacy and maternal education on contraceptive use among older women in university of Nigeria, Nsukka, Enugu state, Nigeria.

In Nigeria, the factors associated with low contraceptive usage were poor level of training and ineffective conveyance of relevant information to women by health personnel, low literacy levels, extreme of reproductive age and extremes of parity, fear of side effects, lack of knowledge and lack of spousal consent (Omo-Aghoja, 2009). Other important factors affecting the use of contraceptive methods are – unsatisfactory sexual life, inaccessibility of contraceptive, socioeconomic status, cultural background and religious beliefs (Blanc, et al, 1998, Ghazal-Aswad, et al, 2001 and Renjhen, et al, 2010. According to WHO (2004), approximately, 120 million couples in the world do not use contraceptives and 300 million are not satisfied with the methods applied. According to Gideon, Allen, Stephen, Tapiwa, Edit, and Hellen (2015), the rationale for contraceptive use was significantly associated with primary or higher education, richest wealth status, protestant religion, and age, number of surviving children, exposure to media, skilled/experienced medical personnel, and adequate timing. However, the main reason precluding women from practicing contraception were lack of health literacy and knowledge (Nansseu, et al, 2015).

ASSOCIATION BETWEEN HEALTH LITERACY AND MATERNAL EDUCATION

Health literacy could be defined as the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health. The US Healthy People (2010), defines health literacy as: the capacity to obtain, interpret and understand basic health information and services and the competence to use such information and services to enhance health, or contraceptive use. Health Literacy in the association of contraceptive use could mean the ability of women to read, understand, and act on contraceptive information. Health literacy as a discrete form of literacy is becoming increasingly important for contraceptive health professionals and other health sectors. The important of education and general literacy on population health, particularly women's health, are well known and researched (Kickbusch, 2001). Health literacy index has been judged as a good tool for measuring the outcome of contraceptive use, health promotion and prevention activities, it can also be used in recording the health competence and capabilities of the population of any country and relate it to a set of health outcomes. It is one of the link by which the health status of individual and the health indices and statistics of any country can

be improved upon. There are factors that determine health literacy in Nigeria such as culture and belief system, poor and ineffective communication, lack of education and low educational level. According to Adekoya, et al, (2015), it has been noted that low health literacy predisposes to poorer health status, poorer disease outcome, lack of understanding in the use of preventive services and frequent hospital visitations amongst others. Factors influencing health literacy in any country must be identified and modified to help improve the health literacy level of the populace. This will invariably improve the health status of the populace with a resultant improvement in the health indices of the country. This is a call for the Government and Health Care Professionals to acknowledge low health literacy as a problem and, therefore, be willing to play their roles in tackling this problem to achieve a healthy Nation. Low functional health literacy and numeracy have a known association with poor health outcomes, yet little work has investigated these markers of health disparity in a family planning population (Lynn &Melissa, 2014).

Education and literacy have been identified and ranked as key determinants of contraceptive use, along with income and income distribution, employment, working conditions and the social environment, although these relationships may require further research. Reports abound from developing countries that highlight the positive impact of education and literacy on population, health and, in particular, women's contraceptive use and the health of children (Nussbaum, 2000). Educated women are more likely to postpone marriage and childbirth, given better health care to their families, and send their children to school and contribute to overall economic growth. While education and literacy are important determinants of contraceptive use, health literacy is becoming more important for social and economic reasons.

There is evidence of a relationship between lower levels of maternal education and higher maternal mortality. Years of formal education are a well-recognized indicator of social position and have been frequently used in internal survey to explore social inequalities (Morrison, C and Jutting JP, 2005). There is a positive relationship between levels of maternal education and contraceptive use (Thaddeus, S, and Maine, D, 1994) even in adverse family or socioeconomic situations, (Grown, C, and Gupta GR, 2005).Studies have found an association between health Literacy and maternal education and the use of contraceptive methods but the relationship between them has not been examined and quantified. Other previous studies (Kinoshita, 2003; Saleem, et al, 2005, Patrikar, et al, 2014; Tilahum, et al, 2013) showed that the more educated the women and their partners, the more likely they were to decide on contraceptive use, thereby increasing their health knowledge. Education, which has been explained as a source of knowledge transmission and transformer of attitudes impart literacy skills which enable people to process a wide range of information and arouse cognitive change that shape individuals' interaction with their surrounding environments. Health researchers and health care professionals, from both the developed and developing worlds, have long been concerned about the link between health and education.

Many researchers have shown support that health knowledge is linked to formal education. In line with this, health knowledge helps to explain the association between formal education and health-related outcomes (Rowe, et al, 2005). Increased health knowledge may be a route through which modest education, even at the primary level influences contraceptive use and child health. Mothers with primary education may accept the use of contraceptives better, not just because of their doctor's advice but also because they understand the importance of those messages. Greater health knowledge is not necessarily a consequence of the curriculum covered in schools, but academic skills, especially literacy which helps women to become more receptive to health information through other sources such as the mass media (Levine, et al, 2001).Mother's knowledge about contraceptive use has greater effects than the literacy of the mothers. Result of a study showed that even when wide spread maternal literacy is prevalent, educating mothers about contraceptive use and other preventable diseases in general might be a very effective means of improving health related issues.

Some researchers hypothesize that acquisition of health literacy through formal education helps mothers to explain why they use contraceptive services. This perspective argues that formal education increases women's health knowledge in one of two ways. For instance, Nayga (2001) posits that formal education may directly expose women to school curriculum about hygiene, Biology, Disease classifications etc. Secondly, it can be through the literacy skills women acquire

in school because literate mothers can read newspapers billboards, banners etc and can understand these health messages better than the non-literates (Levine, et al 2004). Also, a study conducted by Mpuga and Bbaale, (2011) on female education, contraceptives use and fertility in Uganda showed that it is interesting to note that the use of contraceptives increases with education level. It was observed in the above study that more women with post-secondary education use any method (43.4%) and modern method (38%) respectively compared to those with no education (12% use any method and 10% use modern method

THEORETICAL FRAMEWORK

This study is anchored on Health Belief Model (HBM) as a theoretical framework to explain why people will take action to prevent, or control ailment conditions. The purpose of this review was to examine the Health Belief Model (HBM) as a comprehensive, well-tested social-cognitive framework suitable for explaining and predicting contraceptive behavior The HBM offers a robust theory to direct family planning science and practice, yet limitations of past HBM applications to contraceptive behavior are noteworthy. The HBM also offers a comprehensive approach to long-term patient contraceptive management plans. The framework can provide ongoing structure for providers to reassess patients' contraceptive behavior patterns and their dynamic developmental, cognitive and physical health needs within complex socioeconomic, environmental and reproductive contexts (Hall KS, Castano P, Stone P, Westhoff C. 2010)

Perceived barriers are negative consequences of using contraception. This dimension includes factors such as perceived side effects of hormonal contraception (i.e. weight gain or mood swings (Rosenberg MJ, Waugh MS. 1998). Perceived benefits relate to the perceived effectiveness, feasibility and other advantages of using a contraceptive method to prevent pregnancy vis-à-vis the perceived barriers. Through a cost-benefit analysis, the perceived ratio of a contraceptive's benefits to its barriers helps determine the preferred and specific contraceptive action and method (Wiebe ER, Trouton KJ, Dicus J. 2010).

Knowledge of contraceptive behavior has evolved. Comprehensive applications of the HBM employing all constructs, evaluating diverse variables, and focusing on the most pertinent reproductive health contexts, contraceptive behaviors and methods are indicated. Ultimately, the HBM provides a framework for predicting and explaining the complex systems of modern contraceptive behavior determinants and for promoting strategies to improve family planning outcomes **n**ow. With the knowledge of health literacy in University of Nigeria, Nsukka, older women will have the capacity to obtain, interpret and understand basic health information and services and the competence to use such information and services to enhance contraceptive use. This means that older women in this case will be able to read, understand and act on contraceptive information. Some researchers hypothesize that acquisition of health literacy through formal education helps mothers to explain why they use contraceptive services. The goal of this study was to examine the mediating role of health literacy on the relationship between educational level and contraceptive use among older women in university of Nigeria, Nsukka, to explore the ways of using health literacy to influence contraceptive use among older women in Nigeria. The age of older women in this work starts from 35 years and above, when their grey hairs, wrinkles, sagging skin and menopause start to appear in their bodies.

This study was guided by the question: Does the role of health literacy mediate the relationship between educational level and contraceptive use among older women in Nsukka, Nigeria? Our specific goals were:

1. To determine how higher levels of maternal education can boost contraceptive use among older women in University of Nigeria, Nsukka.
2. To determine how higher levels of health literacy influence contraceptive use among older women in University of Nigeria, Nsukka.

METHODS

The survey was conducted between Sept, 2020 and Jan, 2021 to assess the association of health literacy and maternal education on contraceptive use among older women at the University of Nigeria, Nsukka. The University of Nigeria has nine faculties and other administrative units. Two hundred and twenty adult females aged 35years and above were recruited from four faculties of Agricultural sciences, Education, Biological Sciences and Social Sciences. The Chinese version of Health Literacy Questionnaire (HLQ)

was used to describe the health literacy profile of and collect general information on older adults in the university. Data were collected by researchers through face-to-face interviews. The researchers helped the participants who could not fill out the questionnaire by themselves. The 220 participants were selected using a convenient sampling method which allowed us to select participants that were easily accessible within the four faculties. The researchers utilized proportionate allocation to select fifty-five (55) participants each from the four faculties. The participants were identified and recruited with the support of the four faculty officers. Within each sampled faculty, the researchers interviewed women of reproductive age (35–49 years) a group considered as older women in the study and collected information on their reproductive health. We employed a survey logistic regression to analyze the influence of maternal education and health literacy on contraceptive use.

Some respondents were excluded from the current study. (1), because prior research identifies that women's decision-making autonomy is a prominent explanation for mothers' use of health services (Sharma et al., 2007), and because information on decision-making is only collected from married or cohabiting women, the sample is restricted to married or cohabiting women. (2), because, this study focuses on older women, aged 35 years and above for this study. The study restricts the childbearing mothers whose ages are below 35years. (3), those with mental illness or confusion; (4); those with a major illness that makes them unable to cooperate; and(5) other investigators who have been involved in a similar investigation.

All recruited participants who agreed to take part were briefed about the study and why they were being asked to participate. The Health Literacy Questionnaire (HLQ) was divided into five scales and has 23items. Each dimension can be used as an assessment tool alone. The sum of the scores is the total score of health literacy. The health literacy is proportional to the score. The five scales are:

1. Having sufficient information to manage my contraceptives
2. Actively managing my contraceptives
3. Appraisal of contraceptive information
4. Ability to find good contraceptive information
5. Understand contraceptive information well enough to know what to do

MEASURING MATERNAL EDUCATION AND HEALTH LITERACY

According to Connely et al, (2016), Measures of education involve a wide variety of social outcomes in the analyses of social and population change. Education is a significant factor influencing a number of economic phenomena (Jenkins and Siedler, 2007) and also important in far less obvious fields such as health (e.g. Lindeboom et al. 2009).Measuring education appropriately is more difficult, because there is no simple, universal or agreed upon measure of education. Most societies have complex educational systems that have often changed over time. Many social surveys include a measure of years of fulltimeeducation completed. As metricmeasures of education these areparticularly attractivewithin statistical modeling approaches as they can be added to regression models as continuous covariates (seeTreiman, 2009: 382). Therefore, this study measured education using respondent's educational background, that is, measures of the time spent in education (i.e. years of education) and details on the respondent's experiences in compulsory education, how much formal education they have completed, the title or nature of their qualifications.. Maternal educational level was based on years of schooling and divided into lower educational level (i.e., 9 years or less), medium educational level (i.e., 10-12 years), and higher educational level (i.e., more than 12 years of education**.** Measures of education are essential components of many sociological analyses and are powerful predictors of a diverse range of social outcomes. The next set of measures indicates whether women could list up to five forms of modern contraception with the interviewer. A similar measurement has been shown to be related to education (Baker et al, 2010).**Education is related to knowledge of contraceptive methods and their more efficient useas well as healthy behaviors during pregnancy. Agüero and Bharadwaj (2014) found that education increases the knowledge of HIV-preventive behaviors and HIV transmission in Zimbabwe**.

Tomeasure the health literacy is incredibly important. What must be done is to identify the most practical and sensible way to move forward with implementing important measures (Clancy, 2009). Measures of health literacy must go beyond individual reading capability in order to capture how well Nigerians understand what they

hear and what they are told about contraceptives. There is a need to measure the ability to use contraceptive information to attain and maintain good health, using the following assessment factors:

- Oral understanding—how well women understand what they hear and what they have been told about contraceptives
- Health knowledge—whether women have adequate knowledge about contraceptive prevention, medication, and self-care; and
- Navigation skills—whether women are competent to access needed contraceptive services, handle transitions, and find relevant contraceptive information.

-Health literacy was measured by asking questions that directly measure a respondent's health knowledge. For instance, do you have good information about contraceptives? Do you have enough information to deal with contraceptives? Can you manage the use of contraceptives? Do you make time to use contraceptives? Can couples use condom to prevent STDs? etc., Health literacy measures the extent of the knowledge of person regarding the health input on family planning. To determine whether a respondent's answers were correct on the contraceptive use, the answers were compared with the ones filled by the family planning experts. Couples with better health knowledge can also make better decisions about the choice of inputs in health production.

Ethical Clearance;

The Health Research Ethics Committee of the University of Nigeria Teaching Hospital, Ituku Ozalla, approved the study with a clearance certificate bearing the registration number: NHREC/05/01/2008B-FWA00002458-1RB00002323. A necessary permission was also obtained from each of the Deans of faculty to conduct the study. An informed verbal consent was obtained from the study participants and the privacy of the participants and confidentiality of the information were assured.

RESULTS

The results of the findings of this study are presented in this section while the descriptive statistics and correlations of the variables are shown below. The Hayes PROCESS macro results for predicting contraceptive use by educational level and health literacy are shown in Table 2.

Table 1: Means and standard deviation of demographic factors, educational level, health literacy and contraceptive use

Variables	Mean	SD	1	2	3	4	5	6	7	8
Sex	-	-	-							
Age	-	-	-.03	-						
Educational Qualification	-	-	-.06	.02	-					
Income Level	-	-	.06	.28***	.32***	-				
Residence	-	-	.05	.04	.22**	.17*	-			
Partner's Education	-	-	-.10	-.06	.30***	.10	.08	-		
Number of Children	3.36	1.60	.04	.44***	.07	.25**	.12	-.02	-	
Health Literacy	11.70	2.70	-.10	-.05	-.05	.04	.04	.04	-.06	-
Contraceptive use	15.00	4.51	-.04	-.19**	-.03	-.07	.06	.00	-.14*	.53***

Note. *** p<.001; ** p<.01; * p<.05.

Number of children was negatively associated with contraceptive use, (r = -.14, p<.05). This negative association between number of children and contraceptive use may indicate that as the number of children women has increases, the tendency to use contraceptive will decrease.Age at first marriage, being educated, number of living children, having educated partners, and having been informed about contraceptive use at health facilities were positively associated with current contraceptive use.The mediator variable, health literacy was positively correlated with contraceptive use, (r = .53, p<.001). This may point to the direct and buffering association that may exist between health literacy and the use of contraceptive

Table 2: Hayes PROCESS macro results for predicting contraceptive use by educational level and health literacy

Variables	B	B	T	p	95%CI
Educational Level	-.10	-.01	-.22	.83	[-1.00, .80]
Health Literacy	.80	.53	8.49	.000	[.61, .99]

Results in Table 2 showed that educational level was not significantly associated with contraceptive use (β = -.10). This implies that educational level have insignificant or no role to play in the use of contraceptive among older women in the University of Nigeria, Nsukka, Enugu State. Health literacy was positively associated with contraceptive use (β = .53, p<.001). The B showed that each unit rise in health literacy was associated with .80 increases in contraceptive use. This establishes the direct association which exists between health literacy and the use of contraceptive use among older women in the University of Nigeria, Enugu State. The indirect effect of educational level (B -.11, 95%CI = -.51, .47) on the use of contraceptive through health literacy did not differ significantly from its direct effect, (B = -.10, t = -.22, p>.05).The total effect (the effect of both educational level and health literacy) on contraceptive use was not significant, or was rather low, (B = -.21, t = -.39, p>.05). All the variables in the regression model accounted for 28% of the variance in contraceptive use {R^2 = .28, F (2, 189) = 36.16, p<.001}

DISCUSSION

This research aimed to explore the perceived views of the mediating role of health literacy on the relationship between educational level and contraceptive use among older women in university of Nigeria, Nsukka. In this study, health literacy mediates the relationship between educational level and contraceptive use, showing that the association between educational level and contraceptive use was transmitted through health literacy. Health literacy plays an important role in reproductive knowledge and may impact behaviors and outcomes.

The positive association of age with income level and number of children implies that as the age of older women in the University of Nigeria increases, the level of their income, as well as the number of children they have, are expected to increase correspondingly. Women with higher age level were more likely to take up contraceptive method, when compared with women aged 35–39 years, after adjusting for other covariates. This study corroborates with Tiruneh, et al, (2016), which observed that age at first marriage, being educated, number of living children, having educated partners, and having been informed about contraceptive use at health facilities were positively associated with contraceptive use. On the other hand, since age correlated negatively with contraceptive use, this may point to the likelihood that older women are less likely to make use of contraceptive methods during sexual activities.Findings from many systematic reviews suggest that health literacy is related to reproductive health knowledge across a number of topics, including contraception, fertility, prenatal screening, and STIs This suggests that women in urban areas are more likely to have higher levels of income than women in rural areas, and that women with higher levels of income may tend to have higher number of children than those who have low levels of income). The study showed that the older women in urban areas may be more educated than women in rural areas. As the women attain higher qualifications in education, it would be expected that their level of income increases. Also, if their partners are equally educated and have attained higher educational qualifications, their income level will expectedly increase among the women. Few intervention studies conducted to date have shown promising results, indicating that the use of educational level can increase understanding of adequate health literacy, perhaps even reducing literacy-related disparities in reproductive health knowledge (Kimberly A. et al, 2016). Despite a growing recognition of the importance of health literacy in reproductive health, no rigorous, systematic literature reviews have been conducted to date examining the relationship between health literacy and women's reproductive health behaviors and outcomes. (Kimberly A. et al, 2016).

Table 1 showed that sex was not significantly associated with any variable in the study. Age

was negatively associated with contraceptive use, (r = -.19, p<.01) but associated positively with income level (r = .28, p<.001) and number of children, (r = .44, p<.001). **This suggests that contraceptive use is not stable across age and sex** .Educational qualification was positively related to income level, (r = .32, p<.001), residence, (r = .22, p<.01), and partner's education, (r = .30, p<.001).. Income level was positively associated with residence, (r = .17, p<.05) and number of children, (r = .25, p<.01).

Residence and partner's education was not significantly associated with any other variable in the study, especially the main study variables. This may mean that residence and partner's education may have little or no roles to play in the use of contraceptives among women in the University of Nigeria, Nsukka. Health literacy mediates the relationship between educational level and contraceptive use, because the 95%CI of the completely standardized indirect effect did not contain zero (B = -.02, 95%CI = -.07, .05). This indicates that although educational level did not significantly predict or associate with the use of contraceptive, the relationship between educational level and contraceptive use among older women in the University of Nigeria, Nsukka, passes through health literacy, which is a mediator variable. Hence, an increase in health literacy may trigger a corresponding increase in the use of contraceptive among older women in the University of Nigeria, especially in the presence of a variable such as educational level or qualifications. Education can also lead to more accurate health beliefs and knowledge, and thus to better lifestyle choices, but also to better skills and greater self-advocacy. Education improves skills such as literacy, develops effective habits, and may improve cognitive ability. An essential component of the counseling process is education. Contraceptive education aims to provide clients the basic information they need to make informed decisions about their use of contraception and to effectively use the contraceptive methods they have selected (Pazol, K, et al, 2015). Educational interventions can help increase knowledge of available contraceptive methods, enabling individuals to make informed decisions and use contraception more effectively.

CONCLUSIONS AND RECOMMENDATIONS

In this study, health literacy mediates the relationship between educational level and contraceptive use, showing that the association between educational level and contraceptive use was transmitted through health literacy. However, the study showed that Educational level was not significantly associated with contraceptive use while increased health knowledge may be a route through which modest education, even at the primary level influences contraceptive use. Education improves skills such as literacy, develops effective habits, and may improve cognitive ability. The negative association between number of children and contraceptive use in this study indicates that as the number of children women has increases, the tendency to use contraceptive decreases. The positive association of age with income level and number of children implies that as the age of older women in the University of Nigeria increases, the level of their income, as well as the number of children they have, are expected to increase correspondingly. Educational interventions can help increase knowledge of available contraceptive methods, enabling individuals to make informed decisions and use contraception more effectively.

Based on the above identified problems associated with the mediating role of health literacy on the relationship between educational level and contraceptive use among older women in University of Nigeria, Nsukka, two recommendations are made. First, the federal and state governments in Nigeria should target older women's lack of knowledge on contraceptive use especially older women with many children by using more aggressive enlightenment campaigns to educate them properly on the use of its methods and when to seek doctor's advice on the contraceptive use. Second, educational interventions can help increase knowledge of available contraceptive methods, enabling individuals to make informed decisions and use contraception more effectively and third, it is important to provide contraceptive services where many women are likely to access the services. . While further research is necessary, healthcare providers should utilize health literacy best practices now to promote high-quality care for patients.

ACKNOWLEDGMENTS The authors gratefully acknowledge Prof Ajaero and Dr John Bosco Chukwuorji for their assistance in revising and editing the manuscript, and finally to the older women from the University of Nigeria, Nsukka who participated in this study with no grudges.

FUNDING; This research received no specific grant from any funding agency in the institution, public, commercial or not-for-profit sectors.

CONFLICT OF INTEREST; The authors declare that there is no conflict of interest.

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