



COMPREHENSION AND PRACTICE OF MATERNAL HEALTH MESSAGES AMONG PREGNANT WOMEN IN IKENNE, OGUN STATE

**AKINTAYO, BABAFEMI J., EKEH, CHARLES M., &
HUNDER EGULOR**

*Department of Mass Communication, Babcock University, Ilishan-Remo,
Ogun State*

Abstract

Maternal death has been a crippling subject for many nations of the world including Nigeria. To mitigate the risk of continued loss of lives of mothers and babies, maternal health messages are packaged and disseminated over the radio and other media by health professional and communication experts on regular basis. It is one thing to disseminate these vital messages and another for those concerned to comprehend them and take actions were necessary. This study therefore examined pregnant women's comprehension and practice of maternal health messages in Ikenne Ogun state. The study utilized descriptive survey approach; multistage sampling technique was adopted in reaching 150 pregnant women (30 from each centre) who attend antenatal clinical sessions in the five primary healthcare centres situated in Ikenne LGA using a validated questionnaire administered by researchers during routine antenatal checks. Data analysis was carried out using descriptive and inferential statistics. Findings revealed that pregnant women's comprehension of maternal health messages was high although with so much to be improved upon. In the same vein, practice of health messages was found to be high in some, yet low in other areas. It was recommended that more efforts should be directed towards enabling pregnant women in Ikenne and elsewhere comprehend and practice health messages better than they do presently.

Keywords: *Comprehension of health messages, practice of health messages, pregnant women, health messages, maternal health messages*

Introduction

Effective communication acts as a catalyst for change and motivation for action. For communication to be deemed effective, it must consist of the necessary elements needed to drive the message properly to the target which in turn drives the target to action. Planned communication can improve the

condition of a person, organisation or situation. Health communication has proven itself valuable in health related issues as it facilitates the spread of ample information concerning topics of importance; it helps influence attitude and support the right state of mind as well as challenge objectionable behaviour regarding health and uphold that which is appropriate (Bello & Aledoh, 2017). Maibach, Abrams & Marosits (2007) affirm that in respect to the creation of healthiness, its promotion and sustenance, health communication is quickly being accepted and utilised as its function is of great importance. This implies that there is a need for and an appreciation of the role communication plays in attending to and ultimately battling certain health concerns in the society.

Over the years, Nigeria has faced a good deal of health related issues such as Ebola, Lassa fever, Polio, HIV and more recently Covid-19 virus. However, one health issue that has placed the country among the top 5 countries being ravaged in the world is maternal mortality. Judging by the mortality ratio over the years, maternal health although given prominence in hospitals through educational and communication packages in terms of antenatal and postnatal clinic sessions, does not seem to have much improvement over time in the country. Maternal mortality is a worldwide health challenge which continues to constitute a source of concern to governments, religious and socio political bodies as well as international health agencies. Out of the 194 member countries of the World Health Organisation (WHO), Nigeria has the fourth highest maternal mortality rate globally (WHO, 2017). Mojekwu and Ibekwe (2012) reported that in developing countries, women of reproductive age suffer maternal health complications as the most prominent reasons for dilemma during pregnancy and the postpartum periods. These women, particularly those living in rural communities tend to suffer from many preventable complications due to poor management of pregnancies or issues that arise following the pregnancy (Mojekwu & Ibekwe, 2012).

To continue the combat against maternal mortality, the United Nations (UN) Sustainable Development Goals (SDG) target 3.1 under the health and well-being aspect, maintained that the maternal mortality ratio of 70% or fewer deaths per 100,000 live births by the year 2030 is the goal. Okereke, Aradeon, Akerele, Tanko, Yisa and Obonyo (2013) observed that in rural areas, maternal mortality is approximately double the normal rates. They asserted that there are over 828 deaths per 100,000 live births in rural areas

while in urban areas there are 351 deaths per 100,000 live births. This makes the UN SDG target an onerous one requiring more synergistic efforts by government and all concerned. Most interventions to curb maternal complications and untimely death are done through interpersonal communication. This is because in rural communities, different cultural and religious values and beliefs are held high, which make it more practicable to relay health messages to women more on a personal level mostly when they seek medical attention. Asemah (2011) validated this by noting that an endeavour to communicate with rural dwellers would be more effective if it was interpersonal in nature, be it regarding health, agriculture or education. This point has also been buttressed through the activities of extension workers mostly in agriculture and health who interact with rural dwellers regarding their participation in specific areas at interpersonal levels.

Although other intervention efforts are put forward by experts through programmes which air on television or radio as well as published in handbooks, posters and fliers which the mothers can easily read and refer back to, interpersonal communication has been found to be of greater benefit to pregnant women during pre and postnatal clinical sessions (Asemah, 2011). Such interactions with health workers enables them open up and speak freely on areas of need, seek clarification and provide important feedback that can enable health providers know whether he or she is being effective with a specific approach or not. This being the case, it becomes imperative to establish the level of comprehension and practice of health messages pass across to pregnant women intermittently in order to ascertain areas due for improvement. Maternal death has been a crippling subject for many nations of the world including Nigerian (Cooke & Tahir, 2013). Despite that there has been various intervention endeavours put in place by the federal and state governments to help combat maternal mortality in Nigeria, same have yielded little or no results as there has been no significant improvement on the Maternal Mortality Ratio (MMR) of the country over the years.

Estimates of maternal mortality ratio of other low and middle income countries such as Ghana, Morocco, Cambodia and Philippines put forward by WHO, UNICEF, UNFPA, World Bank Group and UNPD joint report (2015) indicates that while maternal mortality ratio in Ghana amounted to 319 deaths per 100,000 live births, and Morocco, Cambodia and the Philippines have estimates of 121, 161 and 114 deaths per 100,000 live births

respectively, Nigeria has a startling 814 deaths per 100,000 live births. This has necessitated a change of approach by health providers working with pregnant women and nursing mothers in seeking ways through which the situation can be ameliorated. Interpersonal communication thus is seen as a veritable approach through which appropriate health conscious behaviours could be communicated to pregnant women as a direct effort aimed at mitigating the scourge of maternal mortality in the country.

Communication serves as a veritable tool for enhancing patient care, hence the implication and cost of poor communication in a system cannot be overlooked, as it can be of grave of consequences (OneHHS, 2016). Korir (2015) stated that effective communication is indispensable in any health promotion or disease prevention plan. Communication provides the information people need to make decisions, the poor execution of communication has been noted by researchers to be of great or adverse consequences. A study conducted by CRICO strategies in 2016 revealed that lapses in communication from the past 5 years were related to 1,744 deaths (Gooch, 2016). Also, predicated on findings from an exploratory study, Renkert and Nutbeam (2011) described the communication in antenatal clinics as that which mostly informs pregnant women on what to do but do not empower them to do it. This suggests a missing link in the communication process especially as it has to do with comprehension of the messages by the recipients – pregnant women, as well as putting to practice what they have been taught. This study therefore seeks to evaluate the comprehension and practice of maternal health messages among pregnant women in Ikenne LGA, Ogun State, Nigeria.

Objectives of the study

The general objective of this study is to investigate the comprehension and practice of maternal health messages among pregnant women. The specific objectives are to:

1. determine the extent to which pregnant women comprehend messages on maternal health dispensed at healthcare centres in Ikenne local government;
2. ascertain the extent of influence maternal health information has on the practices of pregnant women in Ikenne local government.

Research Questions

1. To what extent do pregnant women comprehend messages on maternal health dispensed at healthcare centres in Ikenne local government?

2. To what extent does information on maternal health influence the health practices of pregnant women in Ikenne local government?

Hypothesis

H₀₁: There is no significant relationship between maternal health messages dispensed at health centres and maternal health practices of pregnant women.

Literature review

Comprehension and practice of maternal health messages

Although maternal health messages are constantly disseminated to pregnant women during antenatal clinical visits, it has been revealed over time that many pregnant women, especially those in rural areas do not have equal capacity to comprehend these messages let alone practicing them. In the case of written texts, Stuebing (2017) observed that word recognition or decoding must precede comprehension of the meaning of the text, but people can acquire these skills at differing rates since the skills are developed by different processes. The acquisition of such skills comes with education, implying naturally that the educated ones among pregnant women would recognise, decode and comprehend written maternal health messages better, and are also more likely to practice them than the less educated ones. In the oral mode, Stuebine (2017) noted that some aspects of oral expression are more clearly related to the ability to decode and comprehend than are others. When messages are passed first hand using the first or native language of the receiver, decoding and comprehension occurs faster than through an interpreter or in the case were the sender is not efficient in using the language of the receiver. The vital nature of health messages before, during and after pregnancy means that pregnant women must be able to decode and comprehend before they can practice them. Literacy has been identified as key component that aids decoding and comprehension of health messages among pregnant women and nursing mothers. Veneman (2007) observed that education helps to build habits and behaviours that could have a positive impact on a woman's health because educated women may have more ability to access health information, to know what their options are, and be able to better gauge the quality of the care that they are receiving. Normally, when women become pregnant, they visit a medical facility to talk to a health professional about the state of their health and the child they are carrying.

Ali and Adam (2011) noted that inadequate antenatal care and maternal education were predictors of maternal mortality in the Sudan. Therefore, the provision and use of antenatal care services, the literacy level of the women who use these services and maternal characteristic of the women who use the services must be measured in relation to maternal health outcomes (Andari, 2017). If the antenatal services, literacy levels of women who use them and their maternal characteristics are at par, chance are that a better outcome will be recorded.

Antenatal education has been seen as a positive approach to preparing pregnant women for the experience of childbirth (Anya, Hydera, & Jaiteh, 2008). Andari (2017) believe that there is a correlation between the number or adequacy of antenatal visits, a pregnant woman's level of education, the characteristics of pregnant women, and pregnancy outcomes in Nigeria, because comprehension of health message and understanding of medical instruction largely contribute to prognosis outcomes. A previous study by Thomas (1999) provided evidence of link between literacy and maternal outcomes based on direct assessment of women's literacy skills. He analyzed data from 778 black South African women aged 15–49 who participated in the 1993 survey of the Project for Statistics for Living Standards and Development (PSLD) of South Africa, which covered 9,000 households. These women were given a Literacy Assessment Module (LAM) testing three basic skills: reading comprehension, listening comprehension, practical mathematics and computational skill. Regression analysis showed schooling to be a strong predictor of children ever born (CEB), controlling for age and rural-urban residence: Each additional year of school attendance is associated with 0.12 fewer children. Reading comprehension was an apparent vehicle of this influence: The average woman who answered all six comprehension questions correctly had nearly half a child less than a woman who failed to answer any of the questions correctly, and controlling for income did not alter this finding. Thomas concluded that, “women with better comprehension skills may be better able to access and assimilate information in the community. They may thus be likely to be better informed than their peers and therefore better able to use community services effectively,” (1999, p. 172). This evidence is therefore indicative that literacy can be a catalyst in the ability of pregnant women to decode, comprehend maternal health care messages, and as well engage in safe

maternal health practices in order to safeguard their lives and those of their babies.

Theoretical framework

The study anchors on the elaboration likelihood model, which is a theory by Petty and Cacioppo (1986) in their bid to explicate two situations under which a message can be assimilated. The first is known as the central route while the second is the peripheral route. The central route is taken when the message is thought about and internalised based on how logically persuasive it is, while the peripheral route entails the target adapting to the message without cognitively attending to the information given based on factors such as mood, liking, source or other factors. The model explains that when a message is presented and the targets only adapt to suggested change due to indirect factors, such change is likely to be temporal. However, properly presented messages that stimulate cognitive activity in an audience is likely to elicit better attitudinal or behavioural alteration from recipients.

Methodology

This study on comprehension and practice of maternal health messages among pregnant women in Ikenne, Ogun State, was carried out using the descriptive survey approach. Population consists of pregnant women who attend antenatal clinical sessions, in the five primary healthcare centres situated in Ikenne Local government. A sample size of 150 pregnant women (30 from each centre) was purposively utilized for the study. Instrument for data gathering was a validated questionnaire administered by researchers to pregnant women during antenatal clinical sessions. Data analysis was carried out using descriptive and inferential statistics.

Results and discussion of findings

Below is the presentation of results, followed by discussion of findings.

Research question one: to what extent do pregnant women comprehend messages on maternal health dispensed at healthcare centres in Ikenne local government?

Maternal health messages passed to pregnant women during antenatal clinical sessions ranges from nutrition, exercise, complication readiness, malaria, drug and substance misuse and vaccination.

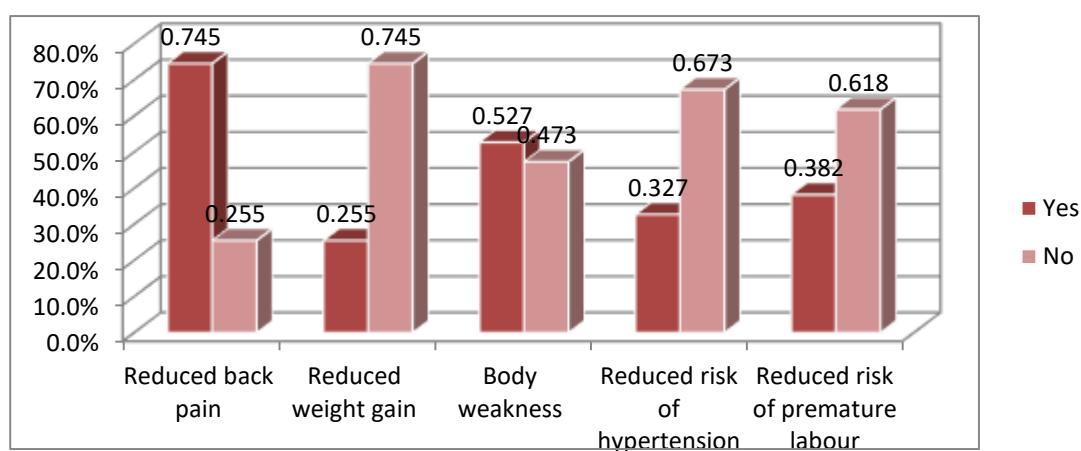
Table 1: Comprehension of Maternal Health Messages on Nutrition

Items	SA Freq. (%)	A Freq. (%)	D Freq. (%)	SD Freq. (%)	U Freq. (%)	Mean (\bar{x})	SD
Vitamin A, Protein & folic acid are good for pregnant women	64 (42.6)	79 (52.6)	-	-	7 (4.8)	4.91	0.79
Meat, fish and vegetables are good for pregnant women	80 (53.3)	45 (30.0)	20 (13.3)	-	5 (3.3)	4.82	0.69
Messages on nutrition are very enlightening	77 (51.3)	73 (48.6)	-	-	-	4.99	1.08
Average Weighted Mean						4.75	0.85

KEY: SA=Strongly Agree, A=Agree, D=Disagree, SD=Strongly Disagree *Decision Rule if mean is: 1 to 1.49 =Undecided; 1.5 to 2.49 = Strongly Disagree; 2.5 to 3.49 = Disagree; 3.5 to 4.49 = Agree; 4.5 to 5 = Strongly Agree Source: Field survey, 2021**

Table 1 reveals pregnant women’s understanding of nutritional health care messages. The Average Weighted Mean=4.75, SD=0.85 indicates that participants strongly agreed to have comprehended maternal health messages dispensed at respective healthcare centres which they attend. Specifically, pregnant women in Ikenne Local Government strongly agreed that Vitamin A, Protein & folic acid are good for pregnant women (\bar{x} =4.91, SD=0.79). In addition, they also strongly agreed that meat, fish and vegetables are good for pregnant women (\bar{x} =4.82, SD=0.69), and lastly strongly agreed that messages on nutrition given at the healthcare centres were very enlightening (\bar{x} =4.99, SD=1.08).

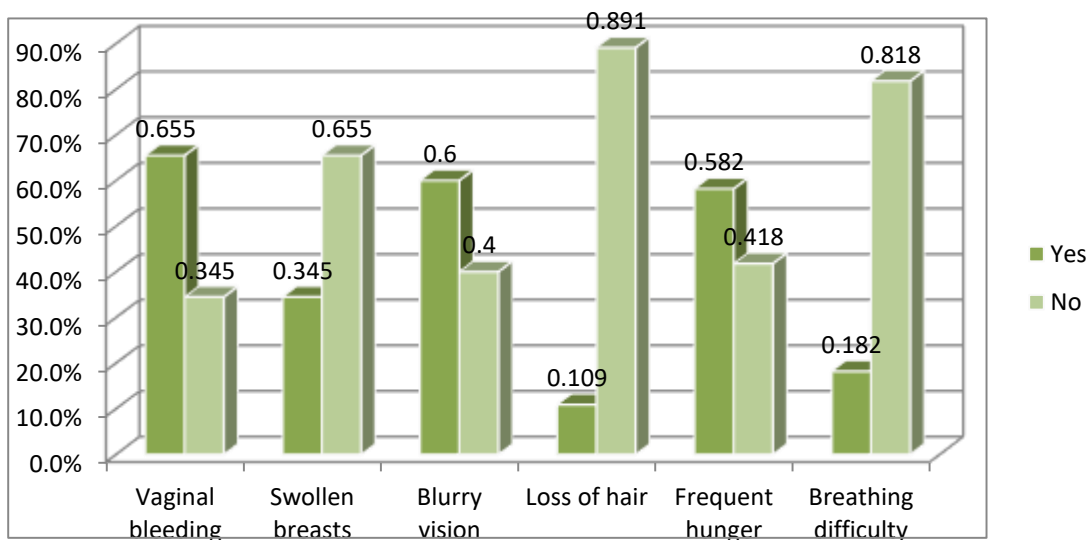
Figure 1: Comprehension of Maternal health messages on Exercise



Source: Field survey, 2021

Figure 1 depicts responses on comprehension of maternal messages on exercise. Majority of pregnant women in Ikenne Local Government understood the message and agreed that regular exercise reduced back pain (74.5%), however, the remaining 25.5% did not agree with this. In addition, respondents disagreed that their understanding of maternal health messages did not include the potency to reduce weight gain (74.5%) but 25.5 per cent understood that exercise was instrumental in reducing weight gain. Also, majority of the study participants understood that exercise helped to manage body weakness; however, 47.3 per cent lack this understanding. On a general note, the result indicate that not all pregnant women comprehended maternal health messages on exercise because of the varied opinions recorded.

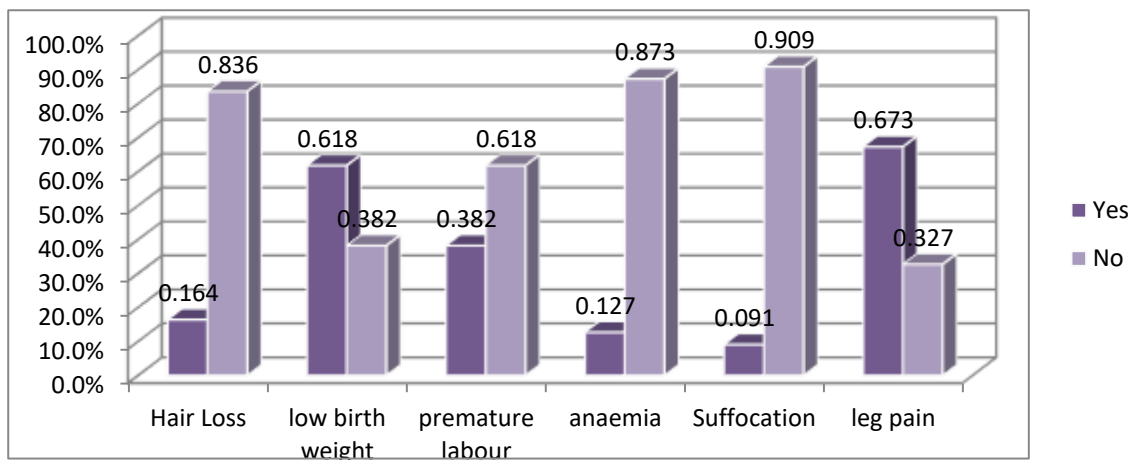
Figure 2: Comprehension of Maternal messages on Complication Readiness



Source: Field survey, 2021

Furthermore, on the understanding of maternal messages on complication readiness, respondents indicated to have comprehended on a general scale messages on danger signs such as vaginal bleeding (65.5%) and blurry vision (60.0%). However, they were not able to identify difficulty in breathing (18.2%) as a danger sign in pregnancy and non-danger signs in pregnancy like swollen breasts was identified as a danger sign (34.5%), loss of hair was also identified as a danger sign although by a small number (10.9%) and frequent hunger (58.2%) this shows that the women did not fully comprehend messages pertaining to danger signs in complication readiness.

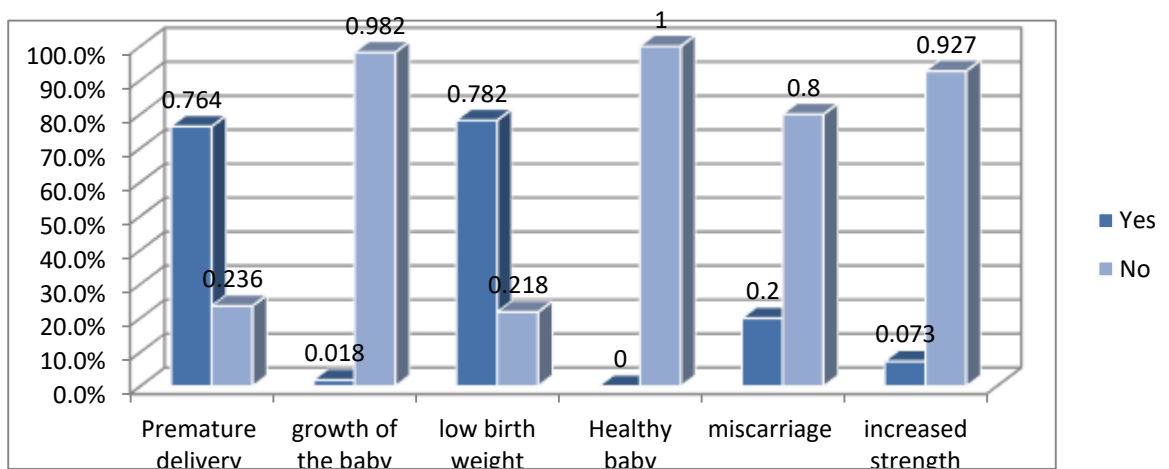
Figure 3: Comprehension of Maternal messages on Malaria



Source: Field survey, 2021

On comprehension of maternal messages on malaria, results showed that participants in the study comprehended them to a good extent because of the three correct parameters set out that involved possible consequences of malaria in pregnancy. Two were positive, low birth weight (61.8%) and premature labour (61.8%). The third correct parameter which was anaemia was negative (87.3%). The incorrect areas such as hair loss (83.6%), leg pain (67.3%) and suffocation (90.9%) were negative. This shows that the pregnant women comprehended messages on malaria.

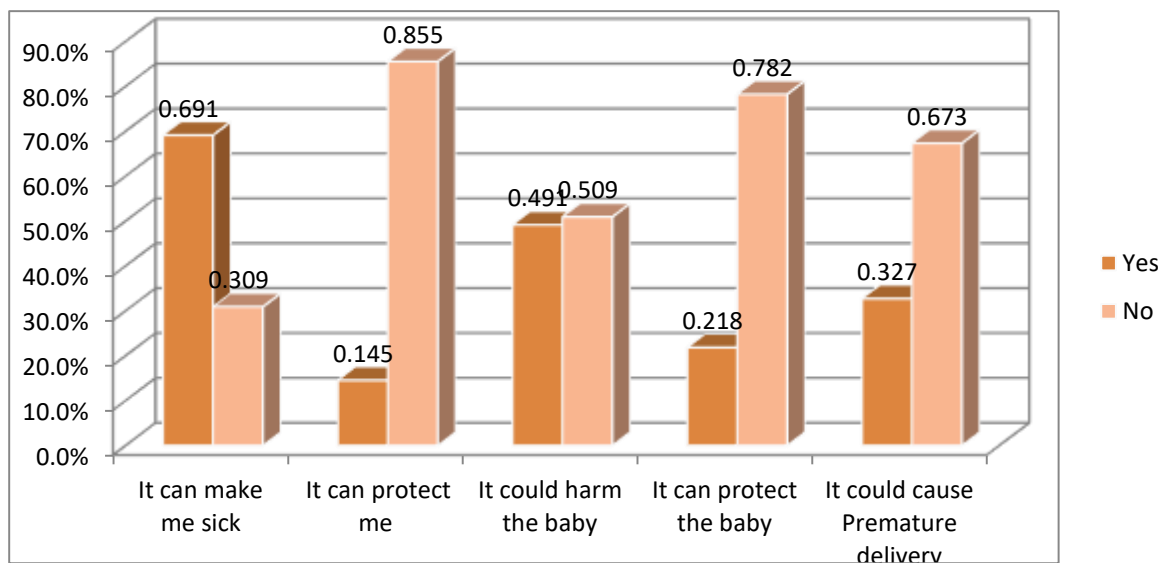
Figure 4: Comprehension of Maternal messages on Drug and substance misuse



Source: Field survey, 2021

Additional results from queries relating to maternal healthcare messages on drug and substance misuse revealed that participants indicated to have understood that consumption of drugs and other harmful substances could lead to premature delivery (76.4%) and low birth weight (78.2%) but the third parameter which was miscarriage was negative (80%), meaning that the women did not understand that drug and substance misuse can cause a miscarriage. Also, pregnant women failed to identify drug and substance misuse as a practice that can impair growth and healthy development of unborn babies as the result returned negative (98.2%). They also failed to identify drug and substance misuse as capable of negatively affecting the health of their unborn babies (100%). This result implies that a segment of pregnant women who participated in the study did not totally comprehend maternal health care messages on drugs and substance misuse delivered to them during antenatal clinical sessions.

Figure 4: Comprehension of Maternal messages on Vaccination



Source: Field survey, 2021

Lastly, on understanding of maternal messages regarding vaccination, analysis showed that respondents do not have a proper understanding of maternal messages on vaccine as some (69.1%) believe that it can make them sick, and 49.1 per cent erroneously thought that it could harm the baby, however, only 21.8 per cent indicated knowledge that it could protect the baby. Interestingly, majority of the respondents (67.3%) felt that it could

cause premature delivery. This implies that their comprehension of maternal messages regarding vaccination was not adequate. In all, the observed trend indicates that the respondents understand messages on nutrition but the comprehension of the other five aspects was inadequate which implies that messages on maternal health were comprehended to a low extent.

Research question two: To what extent does information on maternal health influence the health practices of pregnant women in Ikenne local government?

Table 2: Practice of Messages on Nutrition

Items	A & P Freq. (%)	A Freq. (%)	NT Freq. (%)	Mean (\bar{x})	SD
Regular eating of food & fruits rich in Vitamin A	80 (53.3)	68 (45.3)	2 (1.4)	2.96	0.50
Regular eating of food & fruits rich in Vitamin D	82 (54.6)	68 (45.4)	-	2.99	0.48
Regular eating of food & fruits rich in Folic acid	76 (50.6)	70 (46.6)	4 (2.8)	2.96	0.63
Regular eating of food & fruits rich in Iron	69 (46.0)	79 (52.6)	2 (1.4)	2.99	0.57
Average Weighted Mean				2.94	0.54

Accepted & Practiced= A&P; Accepted= A; NT=Never Tried
Decision Rule if mean is 1 to 1.49 = Never Tried; 1.5 to 2.49 = Accepted;
2.5 to 3 = Accepted & Practiced

On the average, Table 2 show that pregnant women in Ikenne Local Government accepted and practiced maternal health messages on nutrition (Average Weighted Mean=2.94, SD=0.54). Further results from the analysis indicate that participants have accepted and the practice regular eating of foods and fruits rich in Vitamin A (\bar{x} =2.96, SD=0.50), Vitamin D (\bar{x} =2.99, SD=0.48), Folic acid (\bar{x} =2.96, SD=0.63) and Iron (\bar{x} 2.99, SD=0.57). This implies that they accepted and practiced maternal healthcare messages on proper nutrition especially during pre and post-partum periods.

Table 3: Practice of Messages on Exercise

Items	A & P Freq. (%)	A Freq. (%)	NT Freq. (%)	Mean (\bar{x})	SD
Regular heavy exercise	26 (44.0)	68 (45.3)	56 (10.6)	2.06	0.25
Light exercises to stay fit and healthy	89 (59.3)	58 (38.6)	3 (2.1)	2.97	0.60
Light but irregular exercise	75 (50.0)	63 (42.0)	38 (8.0)	2.63	0.70
Total				2.51	0.52

Accepted & Practiced= A&P; Accepted= A; NT=Never Tried
Decision Rule if mean is 1 to 1.49 = Never Tried; 1.5 to 2.49 = Accepted;
2.5 to 3 = Accepted & Practiced

On exercising during pregnancy, the scale averagely showed that pregnant women in Ikenne Local Government practiced maternal health messages on exercise (Average Weighted Mean=2.51, SD=0.52). Analysis showed that they accepted but not many practiced regular heavy exercise (\bar{x} =2.06, SD=0.25), more of the women accepted and practiced light exercises like trekking to stay fit (\bar{x} =2.97, SD=0.60), majority accepted but were irregular in practicing any form of exercise (\bar{x} =2.63, SD=0.70), which is not ideal for their condition. This implies that to large extent, pregnant women in Ikenne accepted but do not optimally practice maternal health messages on exercises.

Table 4: Practice of Messages on Complication Readiness

Items	A & P Freq. (%)	A Freq. (%)	NT Freq. (%)	Mean (\bar{x})	SD
Identified a support source in case of emergency	110 (73.3)	37 (24.6)	3 (2.1)	2.93	0.57
Identified a place of delivery in case of emergency	109 (72.6)	35 (23.3)	6 (4.1)	2.91	0.54
Having an emergency fund source in case of emergency	28 (18.6)	116 (77.3)	6 (4.1)	2.33	0.68
Average Weighted Mean				2.68	0.60

Accepted & Practiced= A&P; Accepted= A; NT=Never Tried
Decision Rule if mean is 1 to 1.49 = Never Tried; 1.5 to 2.49 = Accepted;
2.5 to 3 = Accepted & Practiced

On complication readiness, results in Table 4 revealed that participants accepted maternal messages in this area and practiced it significantly (Average Weighted Mean=2.68, SD=0.60). Analysis showed that majority of pregnant women in Ikenne have identified a support source should emergency situation arise (Mean=2.93, SD=0.57), they also have identified a place of delivery in the case of emergency (Mean=2.91, SD=0.54), however, not many have an emergency fund source to back up emergency situations (Mean=2.33, SD=0.68), which is not good on their part because funding is critical to any emergency situation during pregnancy. It has been known to be a key factor stunting the improvement of maternal health in the African continent. This result suggests that pregnant women accepted and practiced maternal health messages which they were exposed to, but for whatever reasons do not have an emergency source of funding to cater for any sort of emergency situation should any arise.

Table 5: Practice of Messages on Malaria

Items	A & P Freq. (%)	A Freq. (%)	NT Freq. (%)	Mean (\bar{x})	SD
Use of insecticidal treated nets	117 (49.1)	20 (36.4)	13 (14.5)	2.75	0.73
From 14 weeks of pregnancy, anti-malaria treatments to protect mother and baby is compulsory	150 (43.6)	-	-	3.00	0.70
Average Weighted Mean				2.84	0.71

Accepted & Practiced= A&P; Accepted= A; NT=Never Tried
Decision Rule if mean is 1 to 1.49 = Never Tried; 1.5 to 2.49 = Accepted;
2.5 to 3 = Accepted & Practiced

Results in Table 5 largely accepted and practice maternal messages on malaria care and prevention (Average Weighted Mean=2.84, SD=0.71). Further analysis showed that majority accepted and practiced the use of

insecticide treated nets during pregnancy (\bar{x} =2.75, SD=0.73) and as well presented for anti-malaria treatments for mother and baby (\bar{x} =3.00, SD=0.70) from 14 weeks of pregnancy. Malaria is one of the world's top killer diseases, especially for the young children. It is believe that nearly 1 in every 5 deaths among kids in Africa is as a result of malaria. Pregnant women in Ikenne and elsewhere are constantly been taught the relevance of insecticide treated nets as well as the importance of presenting themselves for anti-malaria treatments, which prevents mother and baby from getting infected.

Table 6: Practice of Messages on Drug and Substance Misuse

Items	A & P Freq. (%)	A Freq. (%)	NT Freq. (%)	Mean (\bar{x})	SD
Taking of drugs or substances while pregnant without consulting the doctor is wrong	126 (47.3)	24 (41.8)	-	2.91	0.66
Taking alcohol sometimes while pregnant is okay	97 (41.8)	13 (36.4)	40 (21.8)	2.15	0.83
Average Weighted Mean				2.23	0.74

Key: A&P= Accepted & Practiced; A= Accepted; NT=Never Tried
Decision Rule if mean is 1 to 1.49 = Never Tried; 1.5 to 2.49 = Accepted;
2.5 to 3 = Accepted & Practiced

Results in Table 6 shows that many respondents did not practice maternal messages on the avoidance of drug and other substances except on prescription during pregnancy (Average Weighted Mean=2.23, SD=0.74). Although there is the understanding among pregnant women that drugs or other substances consumption with consulting a medical doctor is wrong, which many of them accepted and practiced (Mean=2.91, SD=0.66), majority among them were keen on the notion that moderated alcohol intake is not harmful during pregnancy (Mean=2.15, SD=0.83). This could have resulted from some cultural practices which prescribe local herbs (*agbo*) concentrated on dry gin, palm/raffia wine and other forms of alcoholic beverages for pregnant women and nursing mothers. Results here indicate that many pregnant women in Ikenne accept this practice.

Table 7: Practice of Vaccination

Items	A & P Freq. (%)	A Freq. (%)	NT Freq. (%)	Mean (\bar{x})	SD
I should get vaccinated as recommended by the doctor	135 (63.3)	15 (34.5)	-	2.80	0.60
Pregnant women must get vaccination for influenza or cold	129 (52.7)	21 (40.0)	-	2.72	0.74
Pregnant women should get vaccination for whooping cough	126 (47.3)	24 (34.5)	-	2.75	0.84
Total				2.72	0.73

Accepted & Practiced= A&P; Accepted= A; NT=Never Tried
Decision Rule if mean is 1 to 1.49 = Never Tried; 1.5 to 2.49 = Accepted;
2.5 to 3 = Accepted & Practiced

It can be deduced from results in Table 7 that pregnant women in Ikenne accepted and practiced maternal messages that stressed the necessity of vaccination at different intervals during pregnancy (Average Weighted Mean=2.72, SD=0.73). This implies that a good number of the pregnant women who participated in this study have been vaccinated at different intervals, while those who have not may be waiting for the appropriate time to do so. In essence, the result to this aspect of the study indicate that pregnant women in Ikenne practiced maternal messages on nutrition, vaccination, malaria and complication readiness more than they did in other aspects such as exercise and drug/substance abuse.

Hypothesis test

H₀₁: There is no significant relationship between maternal health messages dispensed at health centres and maternal health practices of pregnant women.

Table 8: Pearson Product Moment Correlation Analysis Testing the Relationship between maternal health messages maternal health practices of pregnant women

			Nutritional Practice	Exercise Practice	Complication Practice	Drug Abuse Practice	Vaccination Practice
Messages Nutrition	on	Pearson Correlation	.105	.207	.041	.240	.112
		Sig. (2- tailed)	.446	.130	.765	.077	.418
		N	55	55	55	55	55
Messages Exercise	on	Pearson Correlation	-.091	.054	.391**	-.231	-.305*

		Sig. (2-tailed)	.508	.693	.003	.090	.024
		N	55	55	55	55	55
Messages on Complications		Pearson Correlation	.068	-.190	.263	-.165	-.134
		Sig. (2-tailed)	.622	.164	.053	.229	.331
		N	55	55	55	55	55
Messages on Malaria		Pearson Correlation	-.167	-.133	.370**	-.309*	-.189
		Sig. (2-tailed)	.223	.332	.005	.022	.167
		N	55	55	55	55	55
Messages on Drug Abuse		Pearson Correlation	-.300*	.046	.284*	.045	-.217
		Sig. (2-tailed)	.026	.740	.035	.744	.111
		N	55	55	55	55	55
Messages on Vaccination		Pearson Correlation	.117	-.117	.476**	-.219	-.129
		Sig. (2-tailed)	.394	.394	.000	.109	.348
		N	55	55	55	55	55
		Sig. (2-tailed)	.080	.169	.581	.009	
		N	55	5+ 5	55	55	55

Source: Field survey, 2021

Table 8 depicts that messages on drug/substance misuse had a negative significant relationship with nutritional practice ($r = -0.300$, $p < 0.05$). In addition, messages on exercise had a positive significant association with complication readiness practice ($r = 0.391$, $p < 0.05$). This implies that as messages on exercise increases, complication practice will also increase. Vaccination practice had a negative significant relationship with message on exercise ($r = -0.305$, $p < 0.05$), this suggests that as messages on vaccination increases, exercise practice reduces, and vice versa. Furthermore, messages on Malaria had a positive significant relationship with complication practice ($r = 0.370$, $p < 0.05$), which suggests that as malaria messages increase, complication practice increases as well. This also had a negative significant relationship with drug misuse practices ($r = -0.309$, $p < 0.05$). Complication practice also had a significant relationship with message on drug misuse, hence increase in drug/substance misuse messages will increase complication practice ($r = 0.284$, $p < 0.05$); this was also the case for messages on vaccination and complication practices ($r = 0.476$, $p < 0.05$). The results therefore indicate a significant relationship between maternal health

messages and maternal health practices of pregnant women. Thus, the hypothesis that there is no significant relationship between maternal health messages dispensed at health centres and maternal health practices of pregnant women was rejected and restated.

Conclusion and Recommendation

The study investigated comprehension and practice of maternal health messages among pregnant women in Ikenne, Ogun State, Nigeria. Findings revealed that information delivered in primary health centres in the state aligned with the World Health Organisation (WHO) standard of messages to be delivered to pregnant women which includes; nutrition, exercise, complication readiness, malaria, drug and substance misuse and vaccination. Furthermore, results revealed the pregnant women's comprehension of these messages was high although with so much to be improved upon. In the same vein, practice of these messages among the women was also found to be high in some, yet low in other areas. The study therefore concludes that while the dissemination of these messages continues, more efforts must be directed towards enabling pregnant women in Ikenne and elsewhere comprehend and practice them better than they do presently. To facilitate this, localised antenatal care handbooks may be produced and distributed to help reinforce these messages even after the women have left the hospitals.

References

- Andari, O. (2017). Maternal health literacy, antenatal care, and pregnancy outcomes in Lagos, Nigeria. Walden Dissertation and Doctoral Studies Collection. <https://scholarworks.waldenu.edu/dissertations>
- Asemah, E.S. (2011). *Perspectives in advertising and public relations*. Jos, Plateau: Lizborn Press.
- Anya, S. E., Hydera, A., & Jaiteh, L. E. (2008). Antenatal care in the Gambia: Missed opportunity for information, education and communication. *BMC Pregnancy and Childbirth*, 8(1), 9. Retrieved from <http://www.biomedcentral.com/content/pdf/1471-2393-8-9.pdf>
- Bello, S., & Aledoh, K. (2017). Health Communication history and strategies: Reflecting on global perspectives in the Nigerian context. *Babcock Journal of Mass Communication*, 2(3), 13-36.
- Gooch, K. (2016). The chronic problem of communication: Why it's a patient safety issue, and how hospitals can address it. Retrieved October 8, 2017, from <https://www.beckershospitalreview.com/quality/the-chronic-problem-of-communication-why-it-s-a-patient-safety-issue-and-how-hospitals-can-address-it.html>

- Korir, C.M. (2015). The Role of Communication in maternal and child healthcare outcomes: a case of Machakos County, Kenya. (Final year project) Retrieved from <https://www.google.com.ng/url?sa=t&source=web&rct=j&url=https://journalism.uo-nbi.ac.ke/sites/default/files/chss/journalism/journalism/Dr%2520Korir%2520Draft%25209%2520Semifinal-2.pdf&ved=0ahUKEwjZuYuritzWAhXhL8AKHSqbDAUQFggqMAM&usg=AOvVaw0RSs5faP4As3jQaWDa-454>
- Maibach, E. W., Abrams, L. C., & Marosits, M. (2007). Communication and marketing as tools to cultivate the public's health: A proposed "people and places" framework. *BMC Public Health*, 7(88), 1-15. doi:10.1186/1471-2458-7-88
- Mojekwu, J. N., & Ibekwe, U. (2012). Maternal Mortality in Nigeria: Examination of Intervention Methods. *International Journal of Humanities and Social Science*, 2(20), 135-148. Retrieved from https://www.google.com.ng/url?sa=t&source=web&rct=j&url=http://www.ijhssnet.com/journals/Vol_2_No_20_Special_Issue_October_2012/13.pdf&ved=0ahUKEwi57vz5wJnWAhWRmbQKHXRZCqM4ChAWCB0wAQ&usg=AFQjCNEAPvNtYP4UYrCvcrbQuXqZ3e1mTQ
- Okereke, E., Aradeon, S., Akerele, A., Tanko, M., Yisa, I., & Obonyo, B. (2013). Knowledge of Safe motherhood among women in rural communities in northern Nigeria: Implications for maternal mortality reduction. *Reproductive Health*, 10(57), 1-12. doi:10.1186/1742-4755-10-57.
- One HHS (2016). The Importance of clear, effective communication in healthcare. Retrieved October 8, 2017, from <https://www.hhs1.com/the-importance-of-communication-in-healthcare>.
- Petty, R. E., & Cacioppo, J. T. (1986). *The elaboration likelihood model*. Retrieved from <http://www.psy.ohio-state.edu/petty/PDF%20Files/1986-ADVANCES-Petty,Cacioppo.pdf>
- Renkert, S., & Nutbeam, D. (2001). Opportunity to remove maternal health literacy through antenatal education: An exploratory study. *Health promotion international*, 16(4), 381-388. Retrieved from https://www.researchgate.net/profile/Don_Nutbeam/publication/11623662_Opportunities_to_improve_maternal_health_literacy_through_antenatal_education_An_exploratory_study/links/543e987d0cf21c84f23b574d.pdf
- Stuebing, K. W. (2017). Maternal schooling and comprehension of child health information in urban Zambia: is literacy a missing link in the maternal schooling-child health relationship? *Health Transition Review* 7, 149-169.
- Thomas, D., 1999. Fertility, education and resources in South Africa. In: Bledsoe, C., Casterline, J.B., Johnson-Kuhn, J.A., Haaga, J.G. (Eds.), *Critical Perspectives on Schooling and Fertility in the Developing World*. National Academy Press, Washington, DC.
- Veneman, A. M. (2007). Education is key to reducing child mortality: The link between maternal health and education. *UN Chronicle*, 44(4), 58-59. Retrieved from http://www.who.int/pmnch/topics/mdgs/2008unchronicle_aveneman.pdf

World Health Organization (WHO, 2017). Maternal mortality: Levels and trends 2000 to 2017. <https://www.who.int/reproductivehealth/publications/maternal-mortality-2000-2017/en/>