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T.A. Ogunmodede

LAUTECH Library, Ogbomoso, Nigeria, tamodede@yahoo.com

Adefunke Sarah Ebijuwa Mrs

Olusegun Oke Library, LAUTECH, Ogbomoso, Nigeria., funkies_2005@yahoo.com

Solomon Olusegun Oyetola Mr

Olusegun Oke Library, LAUTECH, Ogbomoso, Nigeria, solomonoyetola@yahoo.com

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By

Ebijuwa, Adefunke Sarah
Olusegun Oke Library,
Ladoke Akintola University of Technology Ogbomosho,
Oyo State, Nigeria.
funkies_2005@yahoo.com

Ogunmodede, Thomas Ayinla
Olusegun Oke Library,
Ladoke Akintola University of Technology Ogbomosho,
Oyo State, Nigeria.
tamodede@yahoo.com

and

Oyetola, Solomon Olusegun
Olusegun Oke Library,
Ladoke Akintola University of Technology Ogbomosho,
Oyo State, Nigeria.
solomonoyetola@yahoo.com

ABSTRACT

The study examined health information needs and information sources of pregnant women in Ogbomosho metropolis, Oyo state, Nigeria. Descriptive survey research design was used for the study. The instrument of questionnaire was used to elicit information from the two teaching hospitals in Ogbomosho metropolis namely: Ladoke Akintola University of Technology (LAUTECH), Ogbomosho and Bowen University Teaching hospital (BUTH), Ogbomosho. The period of administration of questionnaire covered two (2) months with the aid of staff Nurse/midwives on duty. The total number of one hundred and fifty questionnaire was distributed to the respondents of which 136 copies were returned and analysed at 90.7% response rate.

The demographic characteristics of the respondents showed that there were graduate that participated in the study. Majority had just spent between 1-5years in marriage. Among information needs of pregnant women includes information on maternity, information on delivery and information on breast feeding among others.

The study also found no significant relationship between use of health information sources and information needs of pregnant women ($N=136$, $r = -0.05$, $P = >0.01$). The study found significant joint effect of independent variables (information needs of pregnant women, source of health information used and constraint to use of health information) on use of health information

sources $F(3,132) 1,583; R=.186, = R^2.035; P >.05$). Few recommendations are given on creating awareness on use of health information sources by pregnant women.

Keyword: Health information, Information needs, Information sources, Pregnant women, Information use.

Introduction

Information is a major resource that is needed in every sphere of life endeavour especially in health matters (Ugboma, 2010). Health information is a vital resource for individuals who according to BIREME/PAHO/WHO, (2008) seek information for as varying reasons as mere curiosity, self diagnosis and analyzing and evaluating treatment for health. Admittedly, information that is needed to study changes in women's health status is either inadequate or unavailable. The quality of the decision made at any given time depends to a large extent on the type of information made available to the user.

Ariyo (1991) opines that information assists in reducing the degree of uncertainty and ignorance in the operating environment, while Corragio (2011) avers that lack of information is the denial of choices and opportunities for living better life. Therefore, the quality of information an individual receives enhances her rightful choice of health care as the case may be. The findings of similar studies by Uchudi, (2001); Fatimi & Avan, (2002) revealed that women in developing countries are often not allowed to visit health care facilities by themselves.

Furthermore, Hossain and Islam (2012) avers that women who live in villages also lack access to information resources and ability to access Information and Communication Technology. These same women are isolated from getting access to information resources that they would need to make their lives better. They have no time to seek information or to get into educational programs, even if those programs are available (Corragio, 2011). According to the Global Health Council, "the health of families and communities are tied to the health of women, the illness or death of a woman has serious and far-reaching consequences on the health of her children, family and community." Yet every 100 seconds, a woman dies in pregnancy or during childbirth, (Corragio, 2011).

Literature Review

Health information needs of pregnant women

Women's information needs on personal, religious, social, domestic, professional or medical are an important factor in determining the quality of life they live, their output professionally or socially, at home and to the world generally (Olorunda, 2004). Saleh and Lasisi (2011) examined information needs and information seeking behavior of rural women in Borno state, Nigeria. This study revealed that the most paramount health information required is ante natal and post natal care, immunizations especially on the six killer diseases, how to prevent and manage Vascular Virginal Fistula VVF, and how to safely deliver pregnancy.

Similarly, Momodu (2002) carried out a study on information needs of rural dwellers in Nigeria. He identified that women particularly needed information on pre and post natal care and current immunization facilities for their children and themselves. Wilson's models of information seeking behaviour (ISB) have suggested that the behaviour occurs as a consequence of the information user perceiving a need for information therefore a pregnant woman might behave differently than cancer patients. In a study by Hsieh and Brennan (2005) participants indicated that they searched for information related to their prenatal genetic counseling need. Mooko's (2005) studies of information needs and information-seeking behavior of women in three rural villages in Botswana revealed that most of the information needs of these women are health-related. They seek information regarding particular diseases, how they are contracted, and how to treat them. Women in developing countries lack information they feel need the most: family planning and reproductive health. Rutakumwa & Krogman's (2000) study revealed the primary concern of women in Uganda was for information on reproductive health and birth control. In Mooko's studies most of the participants turn to medical practitioners (such as village nurses and traditional doctors) for their needs, and they also depend on their prior experience. These Botswanan women also utilized informal networks, such as information from friends, neighbors, and relatives for what they believed to be reliable information.

Health information sources consulted by pregnant women

Sources of information as classified by Tinkham and Voorhies (1977) and Snunith (1998) are formal and informal sources. Mabawonku (1998) found that 57.5% of the respondents considered interpersonal communication from friends and relatives valuable and relevant source of health information. Also, Musoke (2005) studied information access and use by primary health care providers in rural Uganda and reported that the women disseminated health information informally to relatives and friends. Formal sources of information usually carry information that is public through print and non-print media. Health professionals are preferred in particular when medical information is required (Göransson 1999; Noll *et al.* 2001). Depending on the nature of the information need, information is sought from different sources (Davies and Bath 2002; Rees and Bath 2000; Wathen and Harris 2006). However, Barone *et al.* (2002) and Berg and Lipson (1999) here observed that sometimes informal sources, such as friends, family, and relatives, are the ones people turn to when they need health information.

Brief History About Ogbomoso

Ogbomoso can be regarded as a semi-urban town in Oyo state, southwest, Nigeria. The population was approximately 645,000 as of 1991; as at March 2005, it is estimated to be around 1,200,000. The majority of the people are members of the Yoruba ethnic group. It is inhabited by people who are indigenes as well as those who are from other parts of Nigeria and elsewhere. There are five (5) local government areas in Ogbomoso metropolis: Ogbomoso North, Ogbomoso South, Orire, Surulere and Ogo-Oluwa.

Objectives of the study.

The main objective of this study is to examine the health information need and information sources of pregnant women in Ogbomoso metropolis, Oyo State, Nigeria. The specific objectives of the study are to:

1. identify demographic characteristics of pregnant women in Ogbomoso metropolis
2. find out the information needs of pregnant women in Ogbomoso metropolis
3. investigate sources of health information used by pregnant women in Ogbomoso metropolis
4. determine how often pregnant women in Ogbomoso metropolis seek and use information they need
5. investigate the constraints to effective use of health information.

Research questions.

1. What are the demographic characteristics of pregnant women in Ogbomoso metropolis?
2. What are the information needs of pregnant women in Ogbomoso metropolis?
3. What are the sources of health information used by pregnant women in Ogbomoso metropolis?
4. How often do pregnant women seek and use information they need?
5. What constitutes constraints to effective use of health information of pregnant women?

Research hypotheses

- Ho1. There is no significant relationship between use of health information sources and information needs of pregnant women.
- Ho2. There is no significant relationship between use of health information sources and source of health information used.
- Ho3. There is no significant relationship between use of health information sources and constraints to use health information.
- Ho4. There is no significant joint effect of independent variables (Information needs of pregnant women, source of health information used and constraints to use health information) on use of health information sources.
- Ho5. There will be no significant relative effect of independent variables (Information needs of pregnant women, sources of health information used and constraints to use health information) on use of health information sources.

Research methodology

Survey research technique was adopted for the study. Questionnaire method was used to elicit information from the pregnant women. In addition to using questionnaires, the

researchers were able to have direct contact and oral interviews with the pregnant women especially the semi-literate ones to cross-check facts as provided in the questionnaires. 150 questionnaires were distributed to the respondents, and 136 copies were returned completed and found suitable for analysis at 90.7% response rate.

Method of Data Collection

The instrument used for collecting data was the questionnaire, supplemented by unstructured interview. Section A had six (6) questions which dealt with the bio -data of respondents while section B was on the health information need of pregnant women, section C dealt with sources of health information used by pregnant women, section D and E looked at frequency of use of health information sources and constraints to use of health information by pregnant women in Ogbomoso metropolis.

Result Analysis and Discussion of Findings

Demographic characteristics of the respondents

Table 1: Distribution of the respondents by level of education

Level of education	Frequency	Percentage
No response	3	2.2
Primary school leaving	12	8.8
Secondary school leaving	27	19.9
Graduate	78	57.4
Post graduate	15	11.0
None	1	.7
Total	136	100.0

Table 1 shows that 78(57.4%) respondents were graduate, 27(19.9%) respondents had secondary school leaving certificates, 15(11.0%) respondents had post graduate certificates while 12(8.8%) respondents primary school leaving certificates. The finding shows that there were more graduates in the study.

Table 2: Distribution of the respondents by occupation

Occupation	Frequency	Percentage
Farmer	13	9.6
Trader	26	19.1
Civil servant	73	53.7
Artisans	1	.7
Nurse	10	7.4
Banker	2	1.5
Students	11	8.1
Total	136	100.0

Table 2 shows that 73(53.7%) respondents were civil servants, 26(19.1%) respondents were traders, 13(9.6%) respondents were farmers, 11(8.1%) respondents were students while 10 (7.4%) respondents were nurses.

Table 3: Distribution of the respondents by years in marriage

Years in marriage	Frequency	Percentage
1-5 years	74	54.4
6-10 years	26	19.1
11-15 years	8	5.9
16-20 years	12	8.8
21-25 years	16	11.8
Total	136	100.0

Table 4 shows that 74(54.4%) respondents had spent between 1-5 years in marriage, 26(19.1%) respondents had spent between 6-10 years marriage, 16(11.8%) respondents had spent 21-25 years in marriage, and 12 (8.8%) respondents had spent between 16-20 years in marriage while 8 (5.9%) respondents had spent 11-15 years in marriage.

Research Questions

Research Question One

What are the information needs of pregnant women in Ogbomoso metropolis?

S/N	Information Need	No	Yes
1	Information on maternity	43 31.6%	93 68.4%
2	Information on delivery	45 33.1%	91 66.9%
3	Breast feeding	53 39.0%	83 61.0%
4	Information on pregnancy period	47 34.6%	89 65.4%
5	Information after delivery	58 42.6%	78 57.4%
6	Information on immunization	53 39.0%	83 61.0%
7	Information on family planning	58 42.6%	78 57.4%
8	Information on miscarriage	91 66.9%	45 33.1%

The information needs of pregnant women in Ogbomoso metropolis revealed are as follows:

Information on maternity 43(31.6%) respondents disagreed while 93(68.4%) respondents agreed, Information on delivery 45(33.1%) respondents disagreed while 91(66.9%) respondents agreed, Breast feeding 53(39.0%) respondents disagreed while 83(61.0%) respondents agreed. Others on the bottom of the table are information on family planning 58(42.6%) respondents disagreed while 78(57.4%) respondents agreed and Information on miscarriage 91(66.9%) respondents disagreed while 45(33.1%) respondents agreed.

Research Question Two

What are the sources of health information used by pregnant women in Ogbomosho metropolis?

S/N	Sources of health information used	No	Yes
1	Ask a nurse	105 77.2%	31 22.8%
2	Maternity health centre	106 77.9%	30 22.1%
3	Local chemists	114 83.8%	22 16.2%
4	Primary health centre	107 78.7%	29 21.3%
5	Traditional birth attendants	108 79.4%	28 20.6%
6	Radio	108 79.4%	28 20.6%
7	Posters	111 81.6%	25 18.4%
8	Community show talk	106 77.9%	30 22.1%
9	Internet	107 78.7%	29 21.3%
10	Ask a friend	107 78.7%	29 21.3%
11	As my mother	109 80.1%	27 19.9%
12	Others	129 94.9%	7 5.1%

The sources of health information used by pregnant women in Ogbomosho metropolis area as follows: Ask a nurse 105(77.2%) respondents disagreed while 31(22.8%) agreed, Maternity health centre 106(77.9%) respondents disagreed while 30(22.1%) agreed, followed by Local chemists 114(83.8%) respondents

disagreed while 22(16.2%) agreed, Primary health centre 107(78.7%) respondents disagreed while 29(21.3%) agreed. Others are Internet 107(78.7%) respondents disagreed while 29(21.3%) agreed, Ask a friend 107(78.7%) respondents disagreed while 29(21.3%) agreed, Ask my mother 109(80.1%) respondents disagreed while 27(19.9%) agreed.

Research Question Three

How often do you use the above mentioned information sources

Information sources	Frequency	Percentage
Daily	60	44.1
Weekly	37	27.2
Fortnightly	9	6.6
Monthly	28	20.6
Quarterly when there are problems	2	1.5
Total	136	100.0

The above table shows that 60(44.1%) respondents used information sources daily, 37(27.2%) used information sources weekly, 28(20.6%) respondents used information sources monthly, 9(6.6%) used information sources fortnightly, while 2(1.5%) used information sources quarterly when there are problems.

Research Question Four

What constitutes constraints to effective use of health information of pregnant women?

S/N	Constraints to health information used	No	Yes
1	Language barrier	114 83.8%	22 16.2%
2	Finance	111 81.6%	25 18.4%
3	Attitudes of the health workers	112 82.4%	24 17.6%
4	Inadequate functional PHC centre	111 81.6%	25 18.4%
5	Erratic power supply	111 81.6%	25 18.4%
6	Ignorance	103 75.7%	33 24.3%
7	Others	104 76.5%	32 23.5%

The constraints to effective use of health information of pregnant women are as follows: Language 114(83.8%) respondents disagreed, while 22(16.2%) agreed. Finance 111(81.6%) respondents disagreed, while 25(18.4%) agreed. Attitudes of the health workers 112(82.4%) respondents disagreed, while 24(17.6%) agreed. Inadequate functional PHC centre 111(81.6%) respondents disagreed, while 25(18.4%) agreed. Erratic power supply 111(81.6%) respondents disagreed, while 25(18.4%) agreed. Ignorance 103(75.7%) respondents disagreed, while 33(24.3%) agreed. Others 104(76.5%) respondents disagreed, while 32(23.5%) agreed.

Research Hypotheses

Ho1: There is no significant relationship between use of health information sources and information needs of pregnant women.

Variable	Mean	Std. Dev.	N	r	P	Remark
Use of Health information sources	1.7647	1.4618	136	-.050	.559	n.s.
Information needs of pregnant women	9.8750	5.9223				

It is shown in the above table that there was no significant relationship between use of health information sources and information needs of pregnant women ($r = -.050$, $N = 136$, $P > .01$).

Null hypothesis is accepted.

Ho2: There is no significant relationship between use of health information sources and source of health Information used.

Variable	Mean	Std. Dev.	N	r	P	Remark
Use of Health information sources	1.7647	1.4618	136	-.149	.084	n.s.
Source of health Information used	2.2794	1.7371				

It is shown in the above table that there was no significant relationship between use of health information sources and source of health information used ($r = -.149$, $N = 136$, $P > .01$).

Null hypothesis is accepted.

Ho3: There is no significant relationship between use of health information sources and constraints to use health information.

Variable	Mean	Std. Dev.	N	R	P	Remark
Use of Health information sources	1.7647	1.4618	136	-.136	.113	n.s.
Constraints to use health information	1.5000	1.2996				

It is shown in the above table that there was no significant relationship between use of health information sources and constraints to use health information ($r = -.136$, $N = 136$, $P > .01$).

Null hypothesis is accepted

Ho4: There is no significant joint effect of independent variables (Information needs of pregnant women, source of health information used and constraints to use health information) on use of health information sources.

Model	Sum of Squares	DF	Mean Square	F	Sig.
Regression	10.019	3	3.340	1.583	.196
Residual	278.451	132	2.109		
Total	288.471	135			

$R = .186$

$R^2 = .035$

Adj $R^2 = .013$

It was shown in the table above that the joint effect of independent variables (Information needs of pregnant women, source of health information used and constraints to use health information) on use of health information sources was significant ($F(3,132) = 1.583$; $R = .186$, $R^2 = .035$, Adj. $R^2 = .013$; $P > .05$). About 4% of the variation was accounted for by the independent variables.

Ho5: There will be no significant relative effect of independent variables (Information needs of pregnant women, sources of health information used and constraints to use health information) on use of health information sources.

Model	Unstandardized Coefficient		Standardized Coefficient	T	Sig.
	B	Std. Error	B		
(Constant)	2.215	.289		7.674	.000
Information Needs of Pregnant women	-1.544E-03	.022	-.006	-.071	.943
Sources of Health information used	-.107	.099	-.128	-1.448	.150
Constraints to use Health information	-.127		-.113	-1.285	.201

The result above shows the relative contribution of each of the independent variables on the dependent: Information needs of pregnant women ($\beta = -.006$, $P >.05$), Sources of health information used ($\beta = -.128$, $P >.05$) and constraints to use of health information ($\beta = -.113$, $P >.05$) on use of health information sources.

Discussion of Findings

Majority of the respondents have at least primary education. Being a semi urban environment the percentages of respondents with education above secondary level is 68.4%. The majority of these respondents were in the years in marriage ranging from 1-5, and 21-25. The fact that 57.4% respondents are graduate, one would expect that the pregnant women should be proactive in their search for information that borders on their health as suggested by Hsieh and Brennan, (2005) ; Saleh and Lasisi, (2011). Analysis, on information needs, showed a high preference for information on maternity health to be 68.4%, followed by information on delivery to be 66.9% while information on miscarriage was rated low to be 33.1%. Generally the result showed that all respondents showed interest in all information needs that were made available to them.

The result of the analysis on sources of health information use validates previous findings and common beliefs with respect to the use of multiple sources of health information (Davies and Bath 2002; Rees and Bath 2000; Wathen and Harris 2006). The need for information about health seems to become more prevalent in pregnancy. The data presented suggest that pregnant women actively seek for information beyond that offered by their health care providers to meet their needs. However, the predominance of health care providers (Ask a nurse 22.8per cent; PHC 21.3per cent) as major sources of

health information merits special attention. Health professionals are preferred in particular when medical information is required (Göransson 1999; Noll *et al.* 2001). However, sometimes informal sources, such as friends, family, and relatives, are the ones people turn to when they need health information (Barone *et al.* 2002; Berg and Lipson 1999). On the other hand, 20.6 percent cited their traditional birth attendants (TBA). Those who cited others as sources of health information used were rated low. Whether this is because of dissatisfaction with the amount of information offered by providers is only speculative. An alternative explanation is that these women shy away from questioning their health care providers and turn to other sources of information. Other studies have found people use multiple sources for information. The finding supports the assertion of Davies and Bath (2002), Rees and Bath (2000), and Wathen and Harris (2006) that depending on the nature of the information need, information is sought from different sources. Although it is certainly possible that different information sources could provide conflicting information, this study clearly indicates that pregnant women use multiple sources of health information.

An analysis on frequency of use of sources of health information by pregnant women showed that 44.1% respondents showed that they use information daily, 27.2% respondents showed weekly, 20.6% respondents showed that they use information quarterly while 6.6% respondents showed that they use information fortnightly and 1.5% respondents showed that they use information when there is problem. This implies that people only search for information when they need it.

The respondents were asked to identify problems normally encountered in the course of using their stated health information, 24.3% cited ignorance as a major barrier to their using health information effectively. Those who cited other problems were rated 23.5%. Those who cited inadequate primary health care centres were 18.4%. Erratic power supply to access the internet and finance were cited equally and rated to be 18.4%. Those who complained about the attitude of the health workers were 17.6% and 16.2% complained of language barrier. According to Corragio(2011), illiteracy cannot be overcome when lack of accessibility to information as well as by language barriers, exacerbate the situation. Even if the woman in the village has access to the internet, she will not necessarily be able to use the information to improve her health because trying to get information from the internet can be very challenging. Although, there are barriers of literacy and language, language is a common barrier, since most training packages, software, and electronic conferences and journals are in English, many internet postings are also in English.

Conclusion and Recommendation

The health information need and information sources consulted by pregnant women in Ogbomoso metropolis was the major focus of this study. The level of education of majority of the respondents showed that there are more pregnant women with graduate and post-graduate certificates which in turn ought to affect the sources of information consulted by these women in meeting their information needs, Although information

needs of pregnant women in Ogbomosho metropolis were enormous, the sources of information used do not support educational status of the respondents as larger percentage of the respondents ignored utilizing the professionalism of nurses as a good source of information. The level of patronage of maternity health centre, local chemist, primary health centre, the use of media etc. were very low.

Recommendations

In the light of the above, it is therefore recommended that:

1. drastic step be taken as a matter of urgency to increase the level of awareness using several women forum to sensitize Nigerian women on the importance of health care centre and maternity centre in the realization of Millennium Development Goal of health related matter especially on the reduction of maternal death among women.
2. Media houses, such as Radio and Television Broadcasting Corporation should not relent on the dissemination of information that will aid the way information are being sought by pregnant women.
3. These information should also be packaged in different local languages and mother tongues for pregnant women to benefit maximally.

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