

**KNOWLEDGE, ATTITUDE AND USE OF NON-PRESCRIPTION DRUGS AMONG
PREGNANT WOMEN IN OKWE GENERAL HOSPITAL ASABA DELTA STATE,
NIGERIA**¹Okandeji-Barry R. Oghenenioborue (MPH)*, ²Agofure Otovwe (MPH) and ³Orakwe S. Uju (BSc)

Department of Public and Community Health, Novena University Ogume, Delta State Nigeria.

***Corresponding Author: Okandeji-Barry R. Oghenenioborue**

Department of Public and Community Health, Novena University Ogume, Delta State Nigeria.

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ABSTRACT

Aim: The study was aimed at assessing the knowledge, attitude and use of non-prescription drug among pregnant women in Okwe General Hospital Asaba in Delta State. **Study Design:** The study was a descriptive cross sectional survey. **Place and Duration of Study:** Okwe General Hospital Asaba in Delta State, Nigeria. The study was conducted between June to July 2015 **Methodology:** A semi-structured questionnaire was used and administered to 103 randomly selected pregnant women at Okwe General Hospital Asaba. Data was analyzed using SPSS version 15.0 for descriptive and Chi-square test at $p \leq 0.05$. **Results:** Majority (80.6%) of the respondents had good knowledge of non-prescription drugs with no significant association found between educational level and use of non-prescription drugs, 22.3% were currently taking non-prescription drugs. The most common drugs were analgesics, antihistamines, antacids etc. More than half (53.4%) of the respondents were aware that non-prescription drugs were most harmful in the first trimester and 48.5% were aware of the risks associated with use. Majority (53.4%) of the respondents showed a negative attitude towards the utilization of non-prescription drugs. A significant association was found between the knowledge and attitude of respondents towards the use of non-prescription drugs. **Conclusions:** The results of this study showed that few pregnant women were currently using non-prescription drugs and a good number had good knowledge on such drugs. Hence health education on the use of non-prescription drugs during pregnancy should be re-enforce which will in turn sustain knowledge and encourage positive attitude among pregnant women.

KEYWORDS: Non-prescription drugs, Pregnant women, Knowledge, Attitude.**INTRODUCTION**

It has been documented that congenital abnormalities caused by human teratogenic drugs accounts for less than 1% of total congenital abnormalities.^[1] During pregnancy, there are some common ailments many women experience; non-prescription medications are widely used to treat these ailments. Evidence suggests that many people involved in self-medication tend to acquire knowledge of the practice from relatives, neighbours, medicine dealers and sometimes media.^[2] Many people, pregnant women included, use Over The Counter (OTC) medicines for their self-medication. They consider OTC medications safe because they are available without a prescription. A few OTC medicines have a proven safety profile for use during pregnancy, while others have unproven safety or are known to adversely affect the foetus.^{[3],[4]} It is expected that adverse reactions are mostly underreported since the use of non-prescription drugs may or may not be recorded or reported to the doctor.^[5]

Health literacy determines women's knowledge about non-prescription drugs and their utilization of such drugs. Although, OTC (over the counter) drugs are intended for self-medication and are of established efficacy and safety, their inappropriate use due to lack of knowledge of their side effects and interactions could have serious insinuation, especially in special population groups like children, elderly, pregnant and lactating mothers.^[6]

For example, Kline and Westberg conducted a study on the perceived safety of non-prescription or OTC medications and most (62.3%) participant considered OTC safe, but would talk to a health professional before using while 13.1% regarded them as unsafe and would not use during pregnancy.^[7] A Saudi study examining the use, attitudes and knowledge of medication among pregnant women reported that 57.9% believed that physicians prescribe too many medicines, 52.6% believed that by taking more time with patients; the doctor would prescribe fewer medicines, 78.9% of pregnant women agreed that it would be better for the

fetus if they cease medications, while 88.2% supported the statement about being more careful in using medications during pregnancy, 26.3% agreed that all medicines are poisons, 28.9% agreed that drugs do more harm than good.^[8]

In a questionnaire-based descriptive study of 410 antenatal clients attending primary, secondary and tertiary centers in Ibadan, Nigeria, it was found that 19.2% of the women self-medicated. The most used medicines were hemanthines and analgesics such as acetaminophen.^[9] In another study on Potential risk and hazard of self medication among pregnant women in Uyo, Nigeria, reported that 27.6% of the women self medicated.^[10]

A study examining prescription, OTC and herbal medicine use in a rural, obstetric population, in West Virginia, US, found that 92.6% self-medicated with at least one OTC product. In addition, 20.8% took five or more OTC medications during pregnancy. They noted a trend of increased use as pregnancy progressed, especially with acetaminophen, calcium carbonate, cough drops and guaifenesin. Other common over-the-counter medications used included ibuprofen, aspirin, prenatal vitamins and non-sedating antihistamines.^[5] A Saudi study reported 40% of the pregnant women used medications, the most commonly used drugs were paracetamol (acetaminophen) and vitamins (13.2% each), antibiotics (2.6%), herbal remedies (4.6%) and

medications to treat nausea and vomiting in pregnancy (2.6%), NSAIDs, antihistamines and heartburn medications (1.3%). While majority (59.9%) of the women mentioned they had not taken medication during pregnancy.^[8]

Beliefs about medication have been shown to strongly associate with patients adherence to medication.^[11] Mostly, these beliefs are influenced by the knowledge women have about the medicines. There are many beliefs and practices that govern this thinking and might have an effect on a woman's willingness to take medicines during pregnancy or vice versa.^[12] The Application of the health belief model applied to the study provided insight on how the health behavior of the population can be improved.^[13] It is important that pregnant women have an increase knowledge and positive attitude towards drug use in order to discourage the utilization of non-prescription drugs which could incidentally lead to a decrease in the occurrence of birth defects in infants and other pregnancy complications, ensuring a safe and healthy pregnancy thus, improving maternal and child health.

Therefore, the purpose of this study was designed to assess the knowledge, attitude, prevalence of use and risk awareness on non-prescription drugs among pregnant women in Okwe general hospital Asaba Delta State, Nigeria.

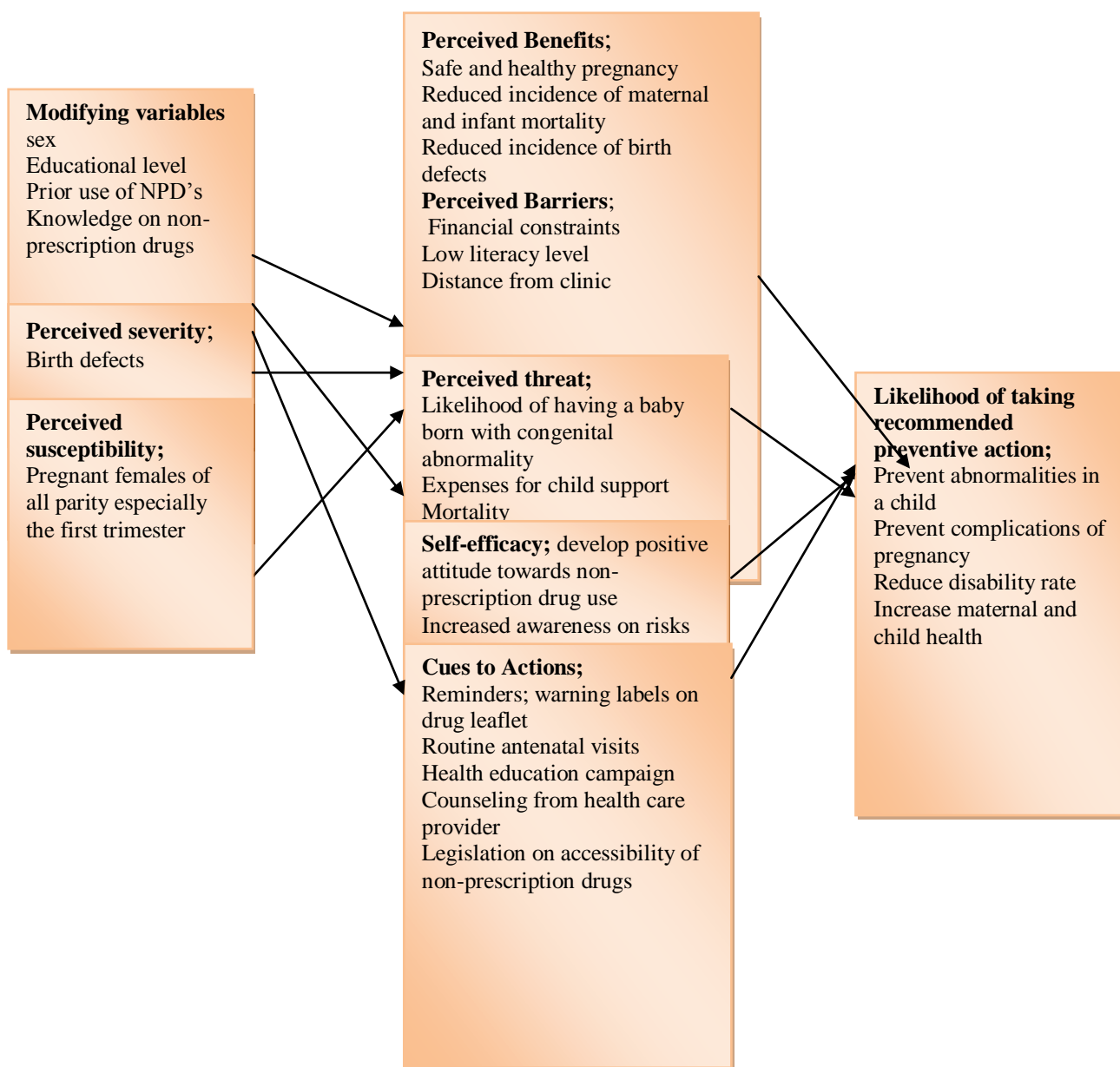


Fig. 1: Application of the Health Belief Model

METHODOLOGY

Study Design

This study is a descriptive cross-sectional survey which uses quantitative method of data collection. The study addressed pregnant women who registered for antenatal care in Okwe General Hospital Asaba.

Study Area

The area of the study is Okwe General Hospital Asaba, Delta State Nigeria. The Hospital is located in Oshimili South Local Government Area of Delta State.

Study Population

The study focused on the 247 pregnant women who registered for antenatal care in Okwe General Hospital Asaba, Delta State.

Inclusion Criteria

Women who were currently pregnant of any parity who registered for antenatal care and available at the time of the study were included.

Exclusion Criteria

Pregnant women who were not registered for antenatal care at the time of the study were excluded.

Sample Size Determination

A calculated sample size of 137 was gotten at 95% confidence level after inputting the following parameters into the Epi-info Version7 Stat calc; total population of 247, Expected frequency of 27.6% (Abasuibong *et al.*, 2012), Design effect of 1 and 5% Confidence Limit.

Sampling Technique

A simple random sampling technique was adopted for the study, which ensured that every pregnant woman had an equal chance of being selected. The study conformed to the ethical principles of the department of public and community health, Novena University, ogume.

Data Collection

Data was collected through a semi-structured questionnaire which was modified following a pilot study. Assistance was offered to illiterate women in explaining and filling the questionnaire. Of the 137 distributed questionnaires, 8 (5.8%) was excluded from the study due to incomplete data, while a total of 26(19%) questionnaires were not returned by the respondents, leaving the response rate at 75% (103).

Instruments for Data Collection

The instrument used for the study was a semi-structured questionnaire consisting of five sections with a total of 43 questions. The first section included socio-demographic characteristics of respondents. The second section had knowledge questions on non-prescription drugs of which score 1 was given to each correct answer and the score zero for wrong answers with a score range of 0-6 and 6-12 rated as poor knowledge and good knowledge respectively. The third section elicited information on Attitude regarding non-prescription drugs in general and specific in pregnancy, of which score 1 was also given to correct answers and score zero to wrong answers with a range of 0-4 and 5-9 rated as negative attitude and positive attitude respectively. The

fourth section had questions to determine the prevalence of use of non-prescription drugs while the fifth Section had questions on risk awareness.

Data Analysis

Data were entered and analyzed using Statistical Product and Service Solution (SPSS) version 15 for windows. Descriptive statistics such as mean, percentages were used to evaluate frequency distribution, while Inferential statistics included Cross tabulation in which chi square was used to test for differences between pregnant respondents and socio-demographic background, beliefs and use of non-prescription drug during pregnancy with level of significance set at $p \leq 0.05$. Findings were summarized in table and charts and incorporated in the result.

RESULTS

According to Table 1, majority 49(47.6%) of the pregnant women were aged 26-33years, 88(88.3%) were married and only 17(16.5%) were Primps. Majority 47(45.6%) of the respondents had received tertiary education and only 9(8.7%) had no formal education There was no association between use of non prescription drugs and educational level of respondents, as the p value is greater than 0.05 ($p=0.066$). Thus, we fail to reject the null hypothesis (H_0). Similarly, more than half 54(52.4%) of the respondents reported having moderate monthly income and only few 6(5.8%) had a high income. The monthly income of respondents did not significantly affect the use of non prescription drugs in pregnancy ($P=0.148$).

Table1. Socio-demographic Characteristics of Study Population (n=103)

Variables	Frequency	Percentage (%)	Use of non prescription drugs
Age in years			
18-25	27	26.2	
26-33	49	47.6	
34-41	27	26.2	
Marital status			
Single	8	7.8	
Married	91	88.3	
Separated	1	1.0	
Living with my partner but not married	3	2.9	
Educational level			
None	9	8.7	0.066*S F Value =2.47 Linearity= 0.012
Primary	9	8.7	
Secondary	38	36.9	
Tertiary	47	45.6	
Occupation			
Student	11	10.7	
Self employed	42	40.8	
Government employed	21	20.4	
Employed by private	21	20.4	
Unemployed	8	7.8	
Monthly income			
None	18	17.5	0.148*S F Value =1.821 Linearity= 0.061
Low	25	24.3	
Moderate	54	52.4	

High	6	5.8	
Number of previous pregnancies			
Prim imp	17	16.5	
1	29	28.2	
2	22	21.4	
3	22	21.4	
>3	13	12.4	
Stage of current pregnancy			
First	14	13.6	
Second	36	35.0	
Third	47	45.6	
Unknown	6	5.8	

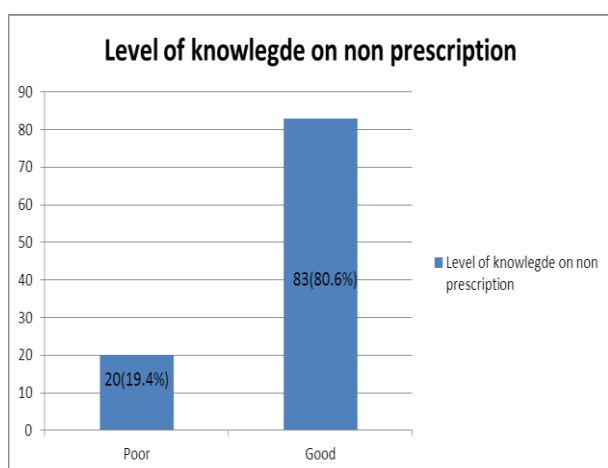
Fig.2 show the level of knowledge of respondents on non-prescription Most 83(80.6%) of the respondent has good knowledge on the use of non prescription drugs in pregnancy with a mean knowledge score of 8.7 ± 3.0 . A high number of respondents agreed to the following knowledge questions; non prescription drugs are drugs given by family/friend or taken without a physicians consent 80(77.7%), non prescription drugs can also be referred to as over the counter drug 71(68.9%), the use of non prescription drugs are most harmful at first trimester

of pregnancy 57(55.3%), disability in a child may be as a result of the use of non prescription drug during pregnancy 80(77.7%) and respondents further disagreed to the statement; non prescription drugs are safe for pregnant women (71.5%). Respondents were also aware of the types of non prescription drug as analgesic (47.6%) and 29.1% identify antibiotics as a type of non prescription drugs (*See table 2 and Fig 2 for details*).

Table II: knowledge of non prescription drugs among respondents

Knowledge Variables	Frequency (n=103)	Percentage (%)
Non prescription drugs are		
Drugs given by a doctor	13	12.6
Drug given by family/friend or taken without a physician consent	80	77.7
Undecided	10	9.7
Non prescription drugs can also be referred to as over the counter drug		
True	71	68.9
False	20	19.4
Undecided	12	11.7
Non prescription drugs are approved for self care		
True	53	51.5
False	42	40.8
Undecided	8	7.8
Non prescription drugs can be purchased in pharmacies		
True	80	77.7
False	15	14.6
Undecided	8	7.8
Non prescription drugs are safe for pregnant women		
True	24	23.3
False	74	71.8
Undecided	5	4.9
Type of non prescription drugs include;		
Analgesic	49	47.6
Antibiotics	30	29.1
Others	7	6.8
Undecided	17	16.5
The recommended dose for these drugs is known to me		
Yes	26	25.2
No	72	69.9
Undecided	5	4.9

The use of non prescription drugs are most harmful at what stage of pregnancy;		
First trimester	57	55.3
Second trimester	7	6.8
Third trimester	4	3.9
Don't know	35	34.0
Non prescription may result in the birth of an abnormal child		
True	77	74.8
False	22	21.4
Undecided	4	3.9
Disability in a child may be as a result of the use of non-prescription drug during pregnancy		
True	80	77.7
False	20	19.4
Undecided	3	2.9



Mean knowledge score of 8.7 ± 3.0

Fig.2: Level of knowledge on non-prescription drugs among respondents

Table 3 shows that most 64(62.1%) of respondents takes drugs without doctors consent or prescription and reasons was high among those who said they take it to treat symptoms/ailment 38(36.9%), distance from clinic 13(12.6%) and convenient/cheaper 11(10.7%). In regards to the Incidence of use of non prescription drugs, 22.3% of respondents were currently taking a non-Prescribed drug and these include analgesic, analgesic and antacids, analgesic and antihistamines, anti-malaria and other herbal medicine. The table also reveals that there was no significant association between the level of knowledge and the use of non prescription drugs among respondents; hence it is concluded that knowledge of non prescription drugs has no effect on use of non prescription drugs.

Table III: The use of non prescription drugs in pregnancy

Variable	Frequency	Percentage (%)	Level of Knowledge on Non-prescription drugs
I have taken drugs without doctors consent			0.213*S χ^2 Value =1.55 df= 1
Yes	64	62.1	
No	39	37.9	
Reason for taking drug without the consent of a doctor;			
Distance from clinic	13	12.6	
Treat symptoms/ailment	38	36.9	
Convenient and cheaper	11	10.7	
Other	2	1.9	
Total	64	62.1	
I am currently taking drugs without doctor's prescription			
Yes	23	22.3	
No	80	77.7	
Currently used non prescription drugs			
Analgesics			
Analgesics and Antacids	7	31.0	
Analgesics and Antihistamines	5	22.0	
Antacids only	4	17.0	
Anti-malaria	4	17.0	

Total	3 23	13.0 100	
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Table 4 gives details on the risk awareness of respondents on the use of non prescription drugs, more than half 55(53.4%) of the respondents were aware of the fact that non prescription drugs is most harmful at first trimester and 8(7.8%) of the respondents mentioned that they have previously given birth to an abnormal baby.

Respondents identify the type of abnormalities as Down syndrome 2(1.9%), Cerebral palsy 3(2.9%) and Speech disorder 3(2.9%). The probable cause of abnormality as identified by the respondents is the use of non prescription drugs 4(3.9%) and only 1(1.0%) was uncertain of the cause.

Table IV: Risk awareness on the use of non prescription drugs

Variables	Frequency	Percentage (%)
Non prescription drugs is most harmful at what stage of pregnancy		
First trimester	55	53.4
Second trimester	6	5.8
Third trimester	5	4.9
Don't know	37	35.9
Am aware of the risk associated with use of non prescription drugs in pregnancy;		
Yes	50	48.5
No	53	51.5
Ever given birth to an abnormal baby;		
Yes	8	7.8
No	95	92.2
Total	103	100.0
Type of abnormality of the baby;		
Down syndrome	2	1.9
Cerebral palsy	3	2.9
Speech disorder	3	2.9
Total	8	7.8
Probable cause of the abnormality of the child is the use of non prescription drug during the pregnancy		
Yes	4	3.9
No	3	2.9
I don't know	1	1.0
Total	8	7.8

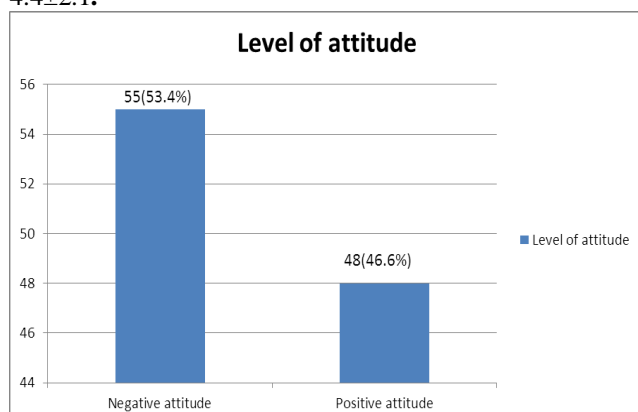
Table 5 shows the attitude of respondents towards the use of non prescription drugs. Some 24(23.3%) of the respondents agreed that doctors prescribe too many drugs, 14(13.6%) of the respondents agree that drug do more harm than good, 36(35%) consent that non prescription drugs are cheaper and convenient and a few 15(15.5%) respondents agree to the statement "It is best for me to take non prescription drug when am sick".

Table V: Attitude of pregnant women towards non-prescription drugs

Attitude variable	Frequency	Percentage (%)
Doctors prescribe too many drugs		
Agree	24	23.3
Disagree	37	35.9
Uncertain	42	40.8
Drug do more harm than good		
Agree	14	13.6
Disagree	41	39.8
Uncertain	48	46.6
All drugs are poisons		
Agree	5	4.9

Disagree	48	46.6
Uncertain	50	48.5
Non prescription drug are cheaper and convenient		
Agree	36	35.0
Disagree	32	31.1
Uncertain	35	34.0
All non prescription drugs poses risk to the unborn child		
Agree	75	72.8
Disagree	21	20.4
Uncertain	7	6.8
It is best for me to take non prescription drug when am sick,		
Agree	16	15.5
Disagree	46	44.7
Uncertain	41	39.8
Non prescription drug is safe but would seek a physician advice before using it		
Agree	92	89.3
Disagree	7	6.8
Uncertain	4	3.9
Non prescription drugs are safer to use		
Agree	8	7.8
Disagree	44	42.7
Uncertain	51	49.5
It is better I don't take non prescription drug when am ill		
Agree	35	34.0
Disagree	27	26.2
Uncertain	41	39.8

Fig 3 shows that more than half 55(53.4%) of the respondents have negative attitude towards the use of non prescription drugs with a mean attitude score of 4.4 ± 2.1 .



*Mean attitude score of 4.4 ± 2.1

Fig. 3: Attitude of respondents towards the use of non prescription drugs

Table 6 shows that there is a significant association between the knowledge of respondents and their attitude towards use of non prescription drugs. Hence we reject the null hypothesis and conclude that the knowledge of respondents affects their attitude towards the use of non prescription drugs in pregnancy.

Table VI: Association between knowledge of respondents and attitude towards the use of non prescription drugs

Variable	Knowledge on the use of non prescription drug			χ^2	Df	P value
	Poor N (%)	Good N (%)	Total N (%)			
Attitude towards the use of non prescription drugs				7.05	1	0.008

Negative	16 (29.1)	39 (70.9)	55 (100.0)			
Positive	4 (8.3)	44 (91.7)	48 (100.0)			
Total	20 (19.4)	83 (100.0)	103 (100.0)			

DISCUSSION OF FINDINGS

The results obtained from this study shows that most of the respondents were between the ages of 23-33 (47.6%) with a mean age of 29.05.4, majority (88.3%) were married and most (41.9%) were in their third trimester of pregnancy. This is comparable with similar findings where majority (57.3%) aged 25-34 with a mean of 26.8, most were married (81.7%) and 41.9% were in their third trimester.^[14] The mean age of respondents in a study conducted among pregnant women in Isra University Hospital was 26.19±4.8 years.^[15]

Availability and access to non-prescription drugs as well as educational level, beliefs and risk awareness on non-prescription drugs determine pregnant women's decisions on drug use during the period of pregnancy. This study and some others have shown that the use of non-prescription or over-the-counter drugs is common worldwide, mostly due to the convenience of self-care and level of knowledge on non prescription drugs.^{[8],[9],[10]}

The current study demonstrated that Overall, 80.6% of the respondents had good knowledge on non-prescription drugs. Results from this study also showed 53.4% of the respondents had a positive attitude towards the use of non-prescription or OTC drugs. Some (23.3%) of the respondents agreed that doctors prescribe too many drugs; this was lower compared to a study conducted in Saudi where more than half (57.9%) of the respondents agreed to the statement,^[7] 89.3% agreed non-prescription drugs were safe but would talk to a physician before taking it. There was a significant association between the knowledge of respondents and their attitude towards the use of non-prescription drugs which proved that respondent's knowledge affected their attitude towards the use of non-prescription drug. On the use of non-prescription drugs, results showed that 22.3% of the respondents were currently taking non-prescription drugs; this is consistent with findings conducted in Nigeria where prevalence of self medication was 27.6%^[10] and in a descriptive study conducted in Ibadan where 19.2% of the women self-medicated.^[9] Similarly, 133(37.9%) were using OTC in current pregnancy^[16] in a Pakistan study, 23% was recorded as the rate of use of OTC medication among Hispanic women.^[16] The study revealed that more than half (53.4%) of the respondents were aware that non-prescription drug was most harmful in the first trimester of pregnancy this could be due to prior knowledge of adverse drug reaction, the study showed that 7.8% have previously had an abnormal child of which more than half (3.9%) identified use of non prescription drugs as a probable cause of abnormality. In contrast, Zaki and Albarraq in a Saudi study reported that newborn anomalies (6.5%) were not attributed to drug use during pregnancy. The study also showed majority

(51.5%) were unaware of the risks associated with non-prescription or OTC drug use in pregnancy.^[8] Analgesic (31.0%) rated high among the non prescription drugs used by respondents; this is in agreement with a study in Saudi which reported the most frequently used drugs by respondents as paracetamol and vitamins (13.2%).^[8]

CONCLUSION

The study shows a considerable level of knowledge on Non-prescription drug among the study population with a moderately low prevalence of non-prescription drug use of population under study, this is encouraging, nevertheless there is need to eliminate the practice as some of the drugs utilized in this study are associated with risks in first trimester of pregnancy.

Pregnant women and the general public should be educated about avenues other than the use of drugs to cope with tension, aches and pains and viral illnesses during pregnancy. They should also be encouraged to always consult their physician or midwives before proceeding to use non-prescription drugs. Training health-care professionals on an ongoing basis on how to prevent, recognize and manage the use of non-prescription drugs and related consequences among the population of pregnant women while emphasizing the need and benefits of routine antenatal care to expectant mothers to themselves and their unborn baby.

ETHICAL CONSIDERATION

Ethical approval for the study was obtained from the department of public and community health, Novena University ethical committee. In addition, an official approval for the study was given by Okwe general hospital board management Asaba, Delta State.

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CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

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