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Knowledge and perceived effects of drug abuse amongst pregnant mothers at Imo state University teaching hospital Orlu

Anthonia Chinwendu Emesowum[1], Festa Chinonye Onyekwuo[1], Ogochukwu E. Ajaegbu[1], Nkiruka Loveline Okoroafor[1], Pamela Chika Ewuzie[1] and *Emmanuel Ifeanyi Obeagu[2]

[1]Department of Nursing Science, Faculty of Health Sciences, Imo State University, Owerri, Nigeria.
[2]Department of Biomedical and Laboratory Science, Africa University, Zimbabwe.
*Corresponding authour: Emmanuel Ifeanyi Obeagu, Department of Biomedical and Laboratory Science, Africa University, Zimbabwe, emmanuelobeagu@yahoo.com, ORCID: 0000-0002-4538-0161

Abstract

Drug abuse during pregnancy poses serious risks to maternal and fetal health. Despite ongoing health education efforts, the misuse of prescription and non-prescription drugs among pregnant women persists in Nigeria. This study assessed the level of knowledge and perceived effects of drug abuse among pregnant mothers attending antenatal care at Imo State University Teaching Hospital (IMSUTH), Orlu. A descriptive cross-sectional study was conducted among 159 pregnant women selected from IMSUTH's antenatal clinic using a structured questionnaire. Data on socio-demographics, knowledge, practices, and perceptions related to drug abuse were analyzed using descriptive statistics. The response rate was 85.03% (159/187). Most respondents were aged 18–25 years (61.0%), and 83.6% had tertiary education. Nearly all participants (99%) were aware of the risks of drug abuse during pregnancy. However, 64.2% reported using prescription or over-the-counter drugs during their current pregnancy. Pain relievers (47.1%) and anti-anxiety medications (23.5%) were the most commonly misused drugs. Pharmacists were the main recommenders of these medications (40.3%). Birth defects (62.3%) and premature birth (17%) were the most perceived effects of drug abuse. Although knowledge of drug abuse risks was high among the respondents, unsafe practices were prevalent. This underscores the need for strengthened antenatal education, stricter drug regulation, and better healthcare provider engagement to reduce the risks of drug misuse during pregnancy.

Keywords: Drug abuse, pregnancy, maternal health, knowledge, perception, self-medication, Nigeria

Introduction

Drug abuse during pregnancy is a global health concern with far-reaching consequences for both maternal and fetal well-being. The physiological and hormonal changes of pregnancy make the maternal body particularly vulnerable to the adverse effects of harmful substances. When pregnant women engage in the misuse of substances such as alcohol, tobacco, opioids, sedatives, stimulants, or unregulated herbal concoctions, the results can be devastating, including miscarriage, intrauterine growth restriction, low birth weight, premature labor, congenital anomalies, and long-term neurodevelopmental impairment in children [1]. In Nigeria, the burden of drug abuse among women of reproductive age is gradually increasing, driven by factors such as misinformation, peer influence, self-medication practices, cultural acceptance of certain substances, and inadequate health education. Among pregnant women, these risks are compounded by socioeconomic challenges and limited access to comprehensive antenatal care services. Particularly worrisome is the use of over-the-counter analgesics and herbal mixtures, which are often consumed without understanding their teratogenic or toxic potential. Despite attending antenatal clinics, many women remain uninformed about the specific risks associated with drug use during pregnancy [2].

Health education remains a cornerstone in reducing the incidence of drug misuse during pregnancy. However, the success of antenatal counseling depends largely on the baseline knowledge and perception of the mothers. Studies from other regions in Nigeria and sub-Saharan Africa have shown that while some women are generally aware that drug use can be harmful during pregnancy, many lack accurate information on the nature, extent, and specific consequences of such exposure. This knowledge gap persists even among women with formal education, indicating the need for more targeted and context-specific educational strategies within the maternal healthcare system [3-4]. Imo State University Teaching Hospital (IMSUTH), Orlu, is

a tertiary care facility that offers antenatal services to a large population of pregnant women across southeastern Nigeria. Despite the hospital's central role in maternal care delivery, there is a paucity of data evaluating the knowledge and perception of pregnant mothers regarding drug abuse in this setting. Understanding these factors is vital to improve antenatal interventions, promote behavioral change, and prevent preventable adverse pregnancy outcomes associated with substance abuse.

Furthermore, with Nigeria's increasing rates of substance misuse—especially the rise in codeine, tramadol, and alcohol use—it is important to identify vulnerable populations, including pregnant women, who may be silently affected. These women may either be active users or passive recipients of culturally ingrained drug practices. By evaluating the types of substances commonly used, the misconceptions surrounding their safety, and the perceived risks among expectant mothers, healthcare providers can be better equipped to deliver effective education and early interventions [5]. Therefore, this study aims to assess the knowledge and perceived effects of drug abuse among pregnant women attending antenatal care at IMSUTH, Orlu. The findings are expected to guide future educational campaigns, inform policy on antenatal drug use screening, and enhance the quality of antenatal care provided to mothers in similar settings across Nigeria and other resource-constrained regions.

Methodology

Research Design

The chosen research design for this study is a descriptive research design.

Area of Study

The study was done at Imo State University Teaching Hospital

Population of Study

The target population for this research comprises all pregnant mothers who seek antenatal and care

at Imo State University Teaching Hospital. This population encompasses women in different trimesters of pregnancy, including those attending their first antenatal visits and those in advanced stages of pregnancy. This wide-ranging population was included to ensure that the research findings accurately represent the diverse demographic of pregnant mothers accessing healthcare services at IMSUTH during the time of the study.

Sample Size

The sample size was determined using the Cochrane formula

$n = z^2 pq/e^2$ Where

n = minimum sample size,
z =1.96= Standard normal deviation
p =87.5% = 0.875
q =1 – P = 0.125
e =0.05= proportion of sampling error tolerated
$n = 1.962\ X\ 0.875\ X\ 0.125/\ 0.052\ 21$
n = 168.07 Compensating for non-response, assuming a non-response rate of 10%
n = 186.74, which is approximately 187

Sampling Technique

A simple random sampling technique was employed to select a total of 187 participants. This technique offers a structured and unbiased approach to participant selection. The antenatal register was used as the sampling frame to ensure that no person was selected twice. Each pregnant mother that registered for antenatal had an equal chance of being chosen, reducing potential bias in the sample. In other to obtain the required number of participants, the ante-natal days were consistently visited by the researcher. This technique took the researcher 9 weeks to obtain the sample size of 187 participants. However, at the end only 159 were found valid and were used for the analysis.

Instrument for Data Collection

Data were collected using a structured questionnaire developed by the research team.

The questionnaire consisted of both closed-ended and open-ended questions, allowing for a comprehensive exploration of the perceived effects of drug abuse. Closed-ended questions, offer structured response options, making data analysis more manageable and enabling quantitative assessment of participants' views. Open-ended questions, on the other hand, provide participants with the opportunity to express their perceptions and experiences in their own words, yielding qualitative data. The questionnaire was designed following a thorough review of the existing literature on drug abuse among pregnant women and was pre-tested to ensure its comprehensibility and appropriateness for the target population.

Method of Data Collection

Data collection for this study made use of self-administered questionnaires and was conducted through face-to-face with the help of 3 trained research assistants. Based on this, the researcher hired and trained three 3rd and 4th year nursing students as research assistants to aid expedite the completion of this study. They were allocated to the clinics where the surveys were filled out. They were also evaluated and certified as being at least proficient in the two most widely spoken languages in the area, Igbo and English. They received training on how to read the questionnaire in the local tongue without changing the questions' intended meaning. After the 22 copies of the questionnaire were pretested, the training's effectiveness was evaluated. The researcher kept a close eye on the data collection process to further guarantee the quality of the data.

Method of Data Analysis

The data collected in this study were analyzed using descriptive technique, specifically frequency table and charts. The method was use to provide robust insight into knowledge, practices, contributing factors to and the perceived effects of drug abuse among pregnant mothers in Imo State University Teaching Hospital (IMSUTH).

Results

A total of one hundred and fifty-nine (159) copies of the questionnaire were used to analyze responses derived from the research on "Knowledge and Perceived effects of drug abuse amongst pregnant mothers at Imo State University Teaching Hospital, Orlu." A total of 187 copies of the questionnaire were sent out and at the end only 159 were returned amounting to 85.03% response rate.

Table 4.1: Socio-demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Age group	18-25	97	61.0
	26-35	57	35.8
	36-45	4	2.5
	46 and more	1	0.6
	Total	159	100.0
Marital Status	Divorced	1	0.6
	Married	102	64.2
	Single	56	35.2
	Widowed	-	-
	Total	159	100.0
Educational Level	None	4	2.5
	Primary	-	-
	Secondary	22	13.8
	Tertiary	133	83.6
	Total	159	100.0
Number of Children	None	110	69.2
	1-2	35	22.0
	3-4	13	8.2
	5 or more	1	0.6
	Total	159	100.0

Table 1 showed that majority of participants (61.0%) were in the age range of 18-25 years, followed by those in the age bracket of 26-35 years (35.8%), while only one participant was above 46 years. More than half of the participants were single (64.2%), one divorced and none was widowed. Most of the participants had a tertiary level of education (83.6%), the rest either had a secondary level of education (13.8%) or did not have at all (2.5%). A notable number of participants had no children (69.2%), while only one participant had up to 5 or more children.
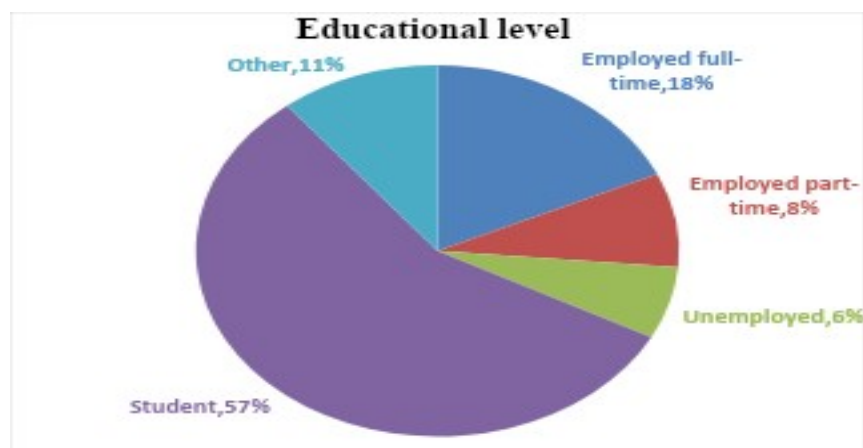
Fig 1: Pie Chart showing Educational Level of Participants

Fig 1 showed that majority of participants were still students (56.6%) followed by those who were employed full-time (18%). A few of them (8%) were employed part-time while the least number of them were unemployed (6.3%). Some of them (11%), however, were in other categories such as those that were self-employed and those who are interns or apprentices.

Fig 2: Pie chart showing the knowledge of drug abuse during pregnancy

Figure 2 showed the knowledge of drug abuse during pregnancy. All participants but one (99%) were knowledgeable about drug abuse during pregnancy. That one participant was unsure rather than not knowledgeable.

Fig 3: Pie chart showing practices of drug abuse during pregnancy

Figure 3 showed practices of drug abuse during pregnancy. Results showed that the majority (64.2%) had taken prescription or over-the-counter drugs during their current pregnancy. This suggests a significant prevalence of drug use among pregnant women in the study sample.

Different drugs abused during pregnancy
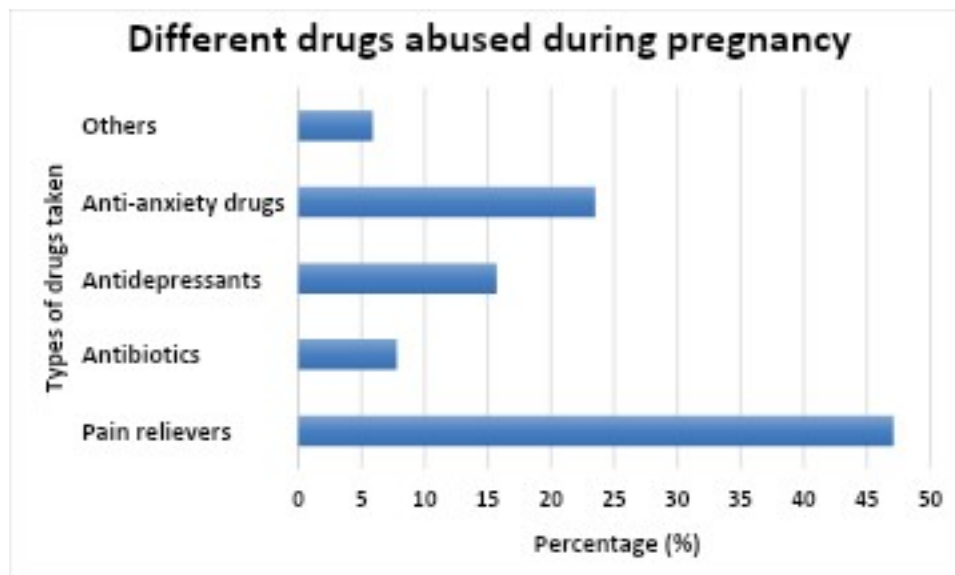
Fig 4: Bar chart showing distribution of the different types of drug abused during pregnancy

A significant portion of respondents who admitted to drug abuse reported using pain relievers (47.1%), while 23.5% took anti-anxiety drugs. The smallest group (5.9%) used other types of drugs, such as vitamin supplements, without a prescription from a certified medical practitioner.

This is an indication that there is a potential issue with the accessibility or misuse of these drugs, which could indicate gaps in healthcare access, education, or healthcare support.
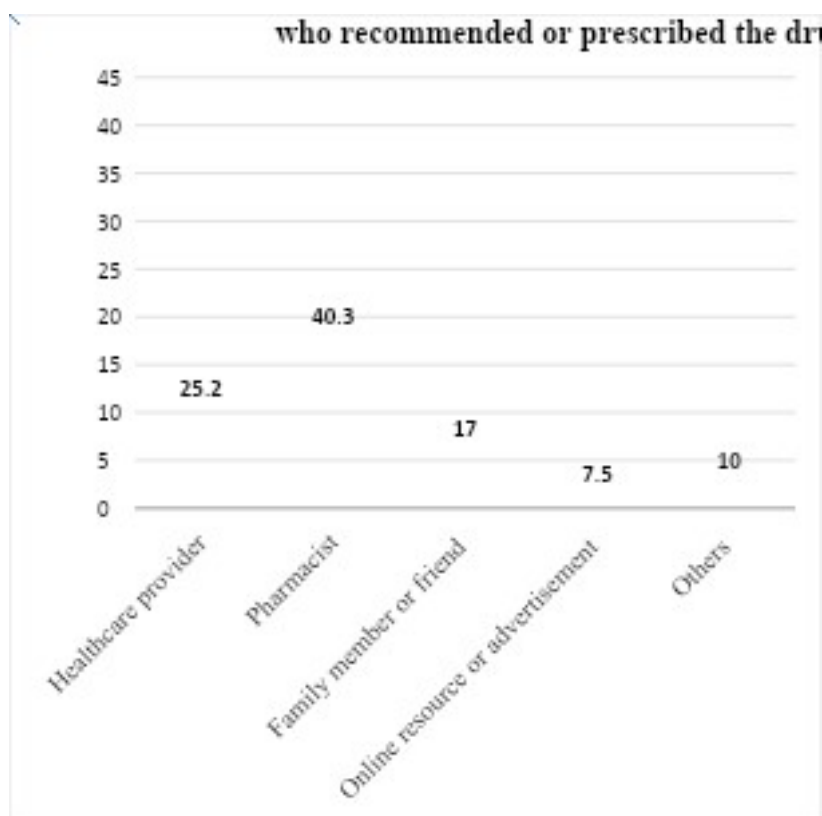

Fig 5: Column Graph Showing Distribution Based on Recommenders of Drugs for the Respondents

Figure 5 showed that the pharmacists (40.3%) are those that mostly recommended or prescribed drugs to the respondents, followed by healthcare providers (25.2%) while the least number of respondents looked to online resources or advertisement for recommendation or prescription. This suggests that pharmacists are often the first point of contact for individuals seeking medication, which highlights their significant influence on patients' medication choices. The finding emphasizes the need for strict regulation and oversight of pharmacists' roles in drug prescription, ensuring they follow proper guidelines to prevent misuse
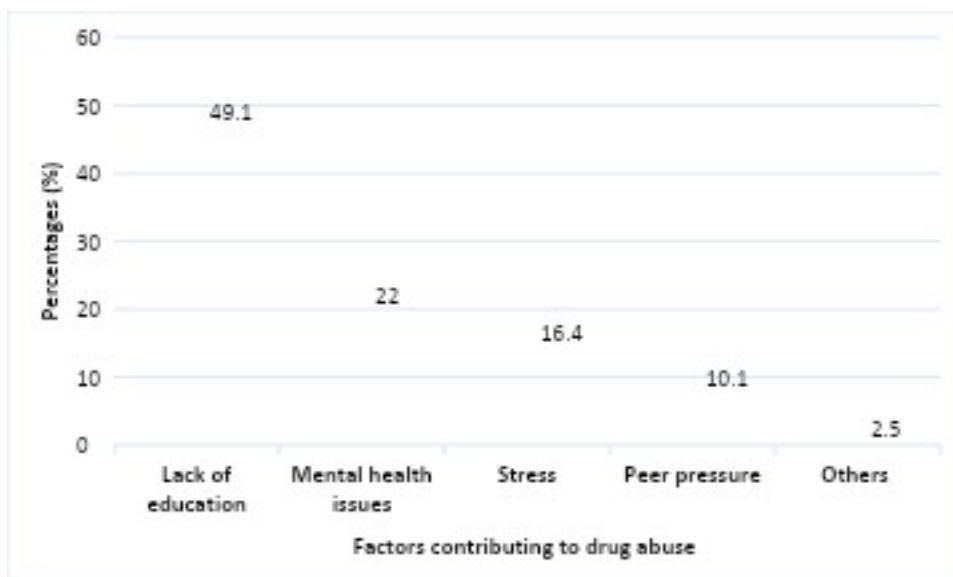
Fig 6: Pie chart showing factors contributing to drug abuse among pregnant women.

Figure 6 showed factors that contribute to drug abuse among pregnant women according to the participants. Most (49.1%) believed that lack of education was a factor, followed by those who indicated mental health issues as a factor. The least number of participants (2.5%) had other opinions such as marital status and hormonal imbalance, as predictors of misuse of drugs among pregnant women. This suggests that educational interventions could be crucial in addressing this issue of drug abuse among women.
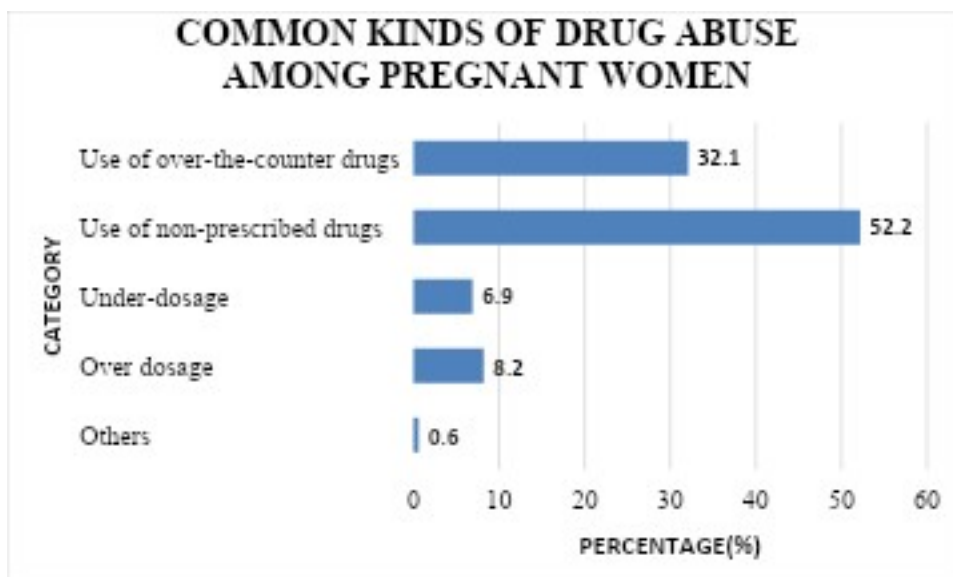
Fig 7: Bar graph showing common types of drug abuse among pregnant women

Figure 7 showed that the highest kind of abuse of drugs among pregnant women is the use of non-prescribed drugs (52.2%), followed by the use of over-the-counter drugs (32.1%). Over-dosage (8.2%) and under-dosage (6.9%) were also common kinds of abuse of drugs among pregnant women. This finding suggests a significant issue with self-medication and the accessibility of drugs without proper medical oversight.
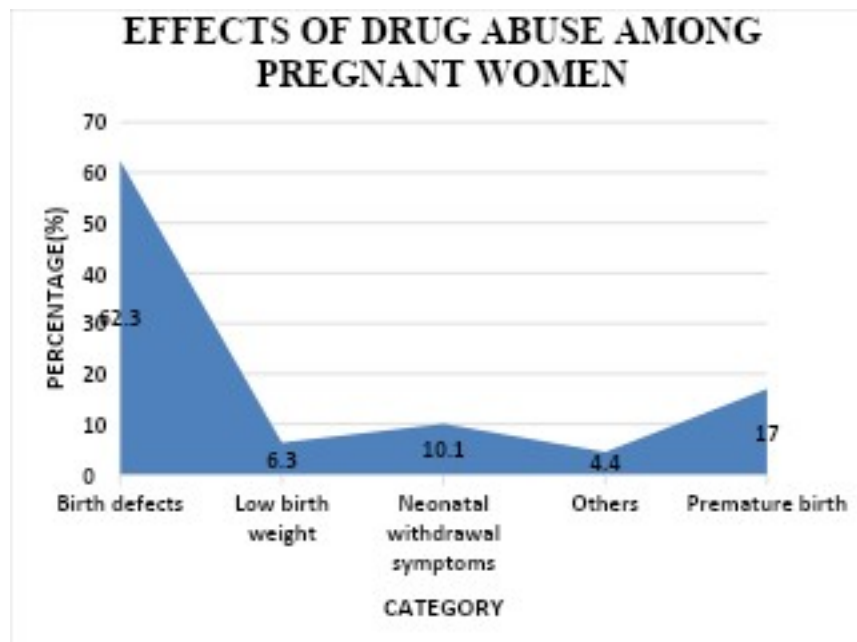
Fig 8: Area chart showing perceived effects of drug abuse among pregnant women

Figure 9 showed that birth defects was the most perceived effects of drug abuse among pregnant women (62.3%), followed by premature birth (17%). A few of them (10.1%) believed that neonatal withdrawal symptoms could result from drug abuse and even fewer believed low birth weight to be among the effects of drug abuse during pregnancy. The least number of participants (4%) were those who believed other effects of drug abuse during pregnancy such as miscarriage.

Discussion

This study assessed the knowledge and perceived effects of drug abuse among pregnant women receiving antenatal care at IMSUTH, Orlu. The response rate of 85.03% (159 out of 187 questionnaires returned) was satisfactory and indicative of strong participant engagement. The demographic profile of respondents revealed that the majority were young women aged 18–25 years (61.0%), many of whom were either students or early in their reproductive years. This age distribution is consistent with national fertility trends and suggests that health education interventions targeting this age group could have long-term public health benefits. A substantial proportion of the respondents (64.2%) were married, while a significant number (35.2%) were single. The overwhelming majority (83.6%) had attained tertiary education, which suggests that the study population was relatively well-educated. This could explain the high levels of awareness regarding the concept of drug abuse in pregnancy, as 99% of the respondents indicated they were knowledgeable on the topic. However, knowledge alone may not translate into safe practices, as a concerning 64.2% admitted to using prescription or over-the-counter drugs during their current pregnancy [6-7].

The most commonly reported abused substances were pain relievers (47.1%) and anti-anxiety medications (23.5%). Alarmingly, a small proportion (5.9%) also used non-prescribed supplements or other substances without the

supervision of a healthcare provider. These findings point to a pattern of self-medication that could reflect gaps in health system trust, limited antenatal pharmacovigilance, or a cultural normalization of certain drug use during pregnancy. Furthermore, non-prescribed drug use was identified as the most common type of drug abuse (52.2%), followed by over-the-counter drug misuse (32.1%). Over- and under-dosing, though less common, were also notable [6-7].

One critical finding was the source of drug recommendation. Pharmacists were the leading group (40.3%) recommending drugs to pregnant women, followed by healthcare providers (25.2%). While pharmacists play an essential role in medication distribution, this raises ethical and regulatory concerns. It underscores the need for stricter oversight of pharmacists' involvement in prenatal drug recommendation, as improper dispensing without adequate patient education or clinical evaluation can exacerbate drug misuse [8-9]. The study also explored perceived contributors to drug abuse. Nearly half (49.1%) of the respondents identified lack of education as a key factor, while others highlighted mental health conditions, hormonal changes, and socioeconomic stressors. This aligns with prior literature indicating that low health literacy, psychological distress, and societal pressures often drive substance use during pregnancy. The high percentage of respondents who were students may also be facing academic or financial stress, further contributing to self-medication tendencies. In terms of perceived effects, a majority (62.3%) recognized birth defects as a potential consequence of drug abuse in pregnancy, followed by premature birth (17%) and neonatal withdrawal symptoms (10.1%). These perceptions are in line with global evidence on the adverse fetal outcomes associated with prenatal exposure to harmful substances. However, only 4% of participants identified miscarriage as a potential effect, suggesting a gap in awareness regarding the full spectrum of risks. This highlights the need for broader, more targeted antenatal education that not only promotes general awareness but also corrects specific misconceptions [10-11].

Conclusion

The findings of this study reveal that while most pregnant women at Imo State University Teaching Hospital, Orlu, possess a general awareness of the dangers of drug abuse during pregnancy, a significant proportion still engage in unsafe drug use practices. The high rate of self-medication—particularly with pain relievers, anti-anxiety drugs, and over-the-counter medications—highlights critical gaps in antenatal counseling, medication regulation, and patient education. The influence of pharmacists and non-clinical sources in drug recommendation further emphasizes the need for tighter controls and improved collaboration between healthcare professionals and antenatal care providers.

References

1. Lester BM, Andreozzi L, Appiah L. Substance use during pregnancy: time for policy to catch up with research. Harm Reduct J. 2004;1(1):5. doi: 10.1186/1477-7517-1-5.
2. Ross EJ, Graham DL, Money KM, Stanwood GD. Developmental consequences of fetal exposure to drugs: what we know and what we still must learn. Neuropsychopharmacology. 2015;40(1):61-87. doi: 10.1038/npp.2014.147.
3. Fetene MT, Teji K, Assefa N, Bayih WA, Tsehaye G, Hailemeskel HS. Magnitude and associated factors of substance use among pregnant women attending antenatal care in public hospitals of eastern Ethiopia. BMC Psychiatry. 2021;21(1):96. doi: 10.1186/s12888-021-03078-5.
4. Mburu G, Ayon S, Mahinda S, Kaveh K. Determinants of Women's Drug Use During Pregnancy: Perspectives from a Qualitative Study. Matern Child Health J. 2020;24(9):1170-1178. doi: 10.1007/s10995-020-02910-w.
5. Emmanuel GO, Akinsolu FT, Abodunrin OR, Ezechi OC. Prevalence and patterns of substance use in West Africa: A systematic review and meta-analysis. PLOS Glob Public Health. 2024;4(12): e0004019. doi: 10.1371/journal.pgph.0004019.

6. Øien-Ødegaard C, Hauge LJ, Reneflot A. Marital status, educational attainment, and suicide risk: a Norwegian register-based population study. Popul Health Metr. 2021 ;19(1):33. doi: 10.1186/s12963-021-00263-2.

7. Hummer RA, Hernandez EM. The Effect of Educational Attainment on Adult Mortality in the United States. Popul Bull. 2013;68(1):1-16.

8. Ayele AA, Islam MS, Cosh S, East L. Community pharmacy professionals' practice in responding to minor symptoms experienced by pregnant women in Ethiopia: results from sequential mixed methods. J Pharm Policy Pract. 2022;15(1):29. doi: 10.1186/s40545-022-00427-x.

9. Awuonda MK, Alem G, Olbert B, Reddy M, Daftary M, Wingate L, Ettienne E. Predictors of Using Pharmacists as a Medication Safety Information Resource Among Women of Reproductive Age. Drug Healthc Patient Saf. 2024; 16:125-132. doi: 10.2147/DHPS.S412786.

10. Ross EJ, Graham DL, Money KM, Stanwood GD. Developmental consequences of fetal exposure to drugs: what we know and what we still must learn. Neuropsychopharmacology. 2015;40(1):61-87. doi: 10.1038/npp.2014.147.

11. Etemadi-Aleagha A, Akhgari M. Psychotropic drug abuse in pregnancy and its impact on child neurodevelopment: A review. World J Clin Pediatr. 2022;11(1):1-13. doi: 10.5409/wjcp.v11.i1.1..

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