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Assessment of Over-the-Counter Drug Use Among Pregnant Women in Damaturu, Northeast Nigeria

Usman Abba[1], Ibrahim Ali Bukar[2]
[1]Department of Obstetrics and Gynecology, Yobe State University/ State Specialist Hospital, Damaturu, Nigeria
[2]Department of Human Physiology, College of Medical Science, Yobe State University, Nigeria

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Corresponding Author:
Dr Usman Abba

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ABSTRACT

Background: Over-the-counter (OTC) drug use during pregnancy poses potential health risks to both mother and fetus. In low-resource settings such as Nigeria, the lack of regulation and limited access to healthcare often drives this practice.

Objective: To assess the prevalence, patterns, and factors associated with OTC drug use among pregnant women attending antenatal care (ANC) in Damaturu, Yobe State.

Methods: A cross-sectional study was conducted among 200 pregnant women attending ANC in selected health facilities. Data were collected via interviewer-administered questionnaires on drug use behavior, types of medications consumed, and awareness of associated risks. Statistical analysis was performed using SPSS version 25.

Results: OTC drug use prevalence was 64%. The most used medications were analgesics (43.8%), antimalarials (27.5%), and herbal preparations (18.8%). Factors influencing usage included previous personal experience (34%), distance to healthcare facilities (26%), and perception of mild symptoms (21%). Educational level and parity were significantly associated with OTC drug use ($p < 0.05$). Only 38% of respondents were aware of potential fetal risks.

Conclusion: OTC medication use during pregnancy remains high in Damaturu and is driven by limited healthcare access and poor awareness. Public health education and regulatory interventions are necessary.

INTRODUCTION

Self-medication using OTC drugs is a global phenomenon, often practiced without sufficient knowledge of risks, particularly in pregnancy. The physiological changes in pregnancy complicate drug pharmacokinetics, increasing the risk of adverse outcomes [1]. While OTC drugs are readily available and perceived as safe, their use during pregnancy can be harmful, especially in the absence of professional guidance [2,3]. In countries like Nigeria, where healthcare infrastructure is limited and regulation of pharmaceutical sales is weak, OTC drug use in pregnancy is prevalent. Prior studies have indicated widespread self-medication among pregnant women in similar settings, driven by affordability, accessibility, and cultural practices [4,5]. A recent study in India found that nearly half of pregnant women used OTC drugs, mostly analgesics and antimicrobials, without prescription [6,7].

This study explores the extent and factors associated with OTC drug use among pregnant women in Damaturu, North-Eastern Nigeria, aiming to contribute evidence for policy and educational interventions.

MATERIALS AND METHODS

Study Area and Population: The study was conducted in Damaturu, the capital of Yobe State, Nigeria. Participants were pregnant women attending ANC at three selected public health facilities.

Study Design and Sample Size: A descriptive cross-sectional survey involving 200 consenting pregnant women. Inclusion criteria were attendance at ANC and willingness to participate.

Data Collection: Structured interviewer-administered questionnaires were used to gather data on sociodemographics, OTC drug use, sources, motivations, and knowledge of risks.

Data Analysis: SPSS version 25 was used for statistical analysis. Descriptive statistics were used to present the data. Associations were tested using Chi-square with a significance level of $p < 0.05$.

RESULTS

Table 1. Sociodemographic Characteristics of Respondents (N = 200)

Variable	Category	Frequency (n)	Percentage (%)
Age Group (years)	<20	18	9.0
	20–24	64	32.0
	25–29	48	24.0
	30–34	30	15.0
	35–39	26	13.0
	≥40	14	7.0
Educational Level	No formal education	21	10.5
	Primary	38	19.0
	Secondary	93	46.5
	Tertiary	48	24.0
Parity Status	Nulliparous (0)	28	14.0
	Primiparous (1)	52	26.0
	Multiparous (2–4)	89	44.5
	Grand multiparous ≥5	31	15.5

Table 2. Prevalence and Types of OTC Drugs Used

OTC Drug Use	Frequency (n)	Percentage (%)
Used at least one OTC drug	128	64.0
Types of OTC drugs used		
– Paracetamol	56	43.8
– Antimalarials	35	27.5
– Herbal products	24	18.8
– Antibiotics	13	9.9

Table 3. Sources and Reasons for OTC Drug Use

Variable	Frequency (n)	Percentage (%)
Sources of OTC drugs		
– Patent medicine vendors (PMVs)	75	59.0
– Local chemists	32	25.0
– Pharmacies	21	16.0
Reasons for usage		
– Prior positive experience	43	34.0
– Distance to healthcare facility	33	26.0
– Perceived mild symptoms	27	21.0
– Cost of consultation	17	13.0
– Peer advice	8	6.0

Table 4. Awareness and Risk-Related Behaviors

Variable	Frequency (n)	Percentage (%)
Aware of risks of OTC drug use	76	38.0
Reads package inserts before use	80	40.0
Consults healthcare provider before use	65	32.5

Table 5. Statistical Associations with OTC Drug Use

Variable	Significance (p-value)
Educational level	p = 0.008
Parity	p = 0.031
Age	Not significant (NS)
Trimester	Not significant (NS)

The majority of respondents were aged 20–34 years, had secondary education, and were multiparous. Sixty-four percent reported using at least one OTC drug during their current pregnancy. The most common drugs used included paracetamol (43.8%), antimalarials (27.5%), herbal products (18.8%), and antibiotics (9.9%).

Drugs were mainly obtained from patent medicine vendors (59%) and local chemists (25%). Motivations included prior personal experience (34%), distance to healthcare facilities (26%), and perception of mild symptoms (21%). Only 38% of the women recognized that OTC drug use could harm the fetus, and just 40% reported reading drug leaflets.

Statistically significant associations were found between OTC drug use and education level ($p = 0.008$) as well as parity ($p = 0.031$). No significant associations were found for age and pregnancy trimester.

DISCUSSION

Our 64% prevalence aligns with similar studies in the UAE (60%) and exceeds figures reported in India (47.1%) [11,6]. This consistency suggests a widespread public health issue, particularly in regions with limited healthcare access.

Analgesics such as paracetamol were the most frequently used drugs, which aligns with findings from India and the UAE [11,6]. Although considered safe, paracetamol can cause liver toxicity at high doses. Notably, only 38% of respondents in our study were aware of these risks. This is consistent with the Indian study that linked poor knowledge to higher OTC drug usage [6].

Misuse of antimalarials and herbal preparations, which was also observed, poses specific risks due to potential teratogenicity or lack of standardized dosing. The UAE and Indian studies further highlighted how cultural factors, distance to facilities, and low trust in physicians contribute to self-medication [11–13].

The low level of awareness about OTC drug risks during pregnancy calls for targeted educational interventions. Incorporating drug safety education into ANC sessions and engaging community health workers for outreach can be effective.

CONCLUSION

OTC drug use during pregnancy remains alarmingly high in Damaturu. Driven by socioeconomic and systemic healthcare challenges, many pregnant women rely on self-medication without adequate awareness of risks. There is a critical need for regulatory frameworks and community-level educational strategies.

RECOMMENDATIONS

1. **Health Education:** Incorporate drug safety awareness into routine ANC.
2. **Policy Enforcement:** Regulate the sale of high-risk OTC drugs.
3. **Community Outreach:** Utilize mass media and local health workers.
4. **Vendor Training:** Train PMVs(patent medicine vendors) on pregnancy-related drug safety.

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