Substance of Abuse consumption; Vendors perception of pregnant women patronage in Ogbomoso, Oyo state

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Abstract

Background: In many African countries, street vendors play an important role in the provision of substances of abuse to the vulnerable populations. The role of vendors in supplying these substances especially to pregnant women remains underexplored. The understanding of vendors' perceptions and willingness to sell is crucial in addressing this public health concern.

Materials & Methods: A community-based cross-sectional study was carried out among 191 street vendors in Ogbomoso, Oyo State, using purposive sampling. Data were collected with a pretested semi-structured questionnaire. Chi-square test and binary logistic regression were used for analysis at a significance level of $p < 0.05$.

Results: The mean age (±SD) of respondents was 34.80 ± 10.87 years. A majority (75.4%) of the vendors were young women, and 61.3% of those were full-time. Less than half (39.8%) were willing to sell substances to pregnant women because of personal choice of buyers, religion, and fear of losing customers. There was also a significant association between perception of harm and vendor type (82.4%), while religion strongly influenced willingness to sell ($p< 0.05$).

Conclusions and Recommendations: Although, street vendors are aware of risk, knowledge gaps and economic pressures still influence their decisions. To address this issue, health education and community-based interventions are needed, especially those that focus on religious and ethical value.

Keywords: Street vendors, Substance use, Pregnancy, Perception

Introduction

Substance use disorder (SUD) is a chronic condition that is treatable and is characterized by cognitive, behavioural, and physiological symptoms. It arises from the difficulty to stop the use of a specific substance (or substances) despite the harmful effects.[1] Approximately 200 million people worldwide use illicit drug posing a significant public health concern.[2] Substances like cannabis, alcohol, and cigarettes, etc. are commonly abused in Nigeria,[3] with an estimated 15 million people affected by substance use, resulting in a prevalence rate of 14.4%, significantly higher than the global rate of 5.5%. [4,5] The use of substances in pregnancy is alarming due to the disproportionate affectation of women in developing countries by substance use disorders. [6,7] An estimation of 2.6 million women who consume alcohol during pregnancy was made, putting both maternal and fetal health at risk.[8] Adverse outcomes such as miscarriages, stillbirths, and birth defects like limb deformities, fetal alcohol syndrome, and withdrawal symptoms in newborns could occur as result of drug related complications during pregnancy.[7]

Street vendors play a vital role in the local economy of many countries, including Nigeria, providing a wide range of goods, including substances that are commonly abused. This form of informal business is

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highly accessible and adaptable, with their activities generally running throughout the day, from morning to night. [9, 10]

While there is substantial research on substance use and its public health implications [11], street vendors' role in providing access to these substances, particularly for high-risk populations like pregnant women, remains under-explored.[7] It is crucial to address this gap because it could inform interventions intended to reduce substance accessibility and improve maternal and fetal health.

The use of substances during pregnancy constitutes a major public health issue, while literature does not clearly outline the clear benefits of the consumption, the harmful effects on maternal and foetal health these include low birth weight, preterm birth, intrauterine growth restriction, developmental delays, congenital anomalies, and increased risks of perinatal and maternal mortality.[1,2]

Studies in Nigeria have revealed the alarming rates of substance use among pregnant women, with alcohol, tobacco, and herbal mixtures among the most commonly used substances. [1,5] However, most of the existing literature focus on the factors influencing demand while neglecting the role of the other key players on the supply-side such as street vendors. Street vendors have become integral to the local economy and often sell these substances without proper regulatory supervision providing easy access for pregnant women. [6]

Risky health behaviours such as the sale of harmful substances is often driven by economic hardships. [6] The local economy prioritizes the sale of psychoactive substances to meet daily financial needs due to the financial challenges and limited opportunities faced by street vendors. [7] Consequently, the importance of understanding the perceptions, attitudes, and practices of street vendors regarding the sale of substances to pregnant women cannot be overemphasised as it aids the formulation of comprehensive health strategies.

Cultural beliefs determine the sale and consumption of substances during pregnancy. These substances, such as alcohol and herbal concoctions are believed to have medicinal properties that ease labour, correct foetal positioning, or reduce pregnancy-related discomforts. [8] These culturally embedded perceptions, often lacking scientific evidence, continue to influence the use and sale of harmful substances among pregnant women. [9]

Addressing the behaviours of pregnant women as well as the social and economic structures that support substance use is a necessity emphasized by World Health Organization. [4] It is crucial to curb substance accessibility and improve maternal and child health outcomes by targeting key players including street vendors with the use of public health interventions.

Previous research has shown that pregnant women frequently have insufficient awareness of the risks associated with the use of substances in pregnancy. [10] There is a notable lack of studies focusing on the perception of substance of abuse vendors regarding this issue despite their involvement in the informal supply chain of these substances. Stakeholder-driven educational programs have proved to cause an appreciable reduction in exposure to harmful substances in LMICs. [11] However, there is still a significant absence in the evaluation of the perception and willingness of street vendors in Ogbomoso, Oyo State, presenting a significant gap in the literature and underscoring the need for this study.

Materials and Methods

The study employed a cross-sectional descriptive research design. The target population for this study comprises all vendors engaged in the open sale of substances of abuse like sachet alcohol, herbal substances, or other illicit substances operating within Ogbomoso.

A purposive sampling technique was employed, targeting specifically those street vendors who sell substances of abuse to pregnant women. This non-probability sampling approach was considered appropriate, as it enabled the intentional selection of respondents most likely to possess knowledge and insights relevant to the study objectives.

The inclusion criteria include individuals aged 18 years and above who operate as street vendors selling substances of abuse within Ogbomoso, while the exclusion criteria include those individuals who met the age requirement but were assessed to be incapable of providing valid responses to the study instrument due to significant physical or mental impairments.

Interviewer-administered, semi-structured questionnaires were used to gather data for this study. The questionnaire was designed to elicit both structured and open-ended responses. The questionnaire was pretested.

All completed questionnaires were reviewed and cleaned in the field by the interviewers on a daily basis. Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS), version 26.0. Categorical variables were summarized using percentages, and presented in tables and pie charts. Continuous variables were analyzed using mean and standard deviation, and were also displayed in tables and graphs. Bivariate analysis was conducted using Pearson's chi-square test to evaluate

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associations between categorical variables, with significance level set at p-values < 0.05 significant for all inferential tests.

Ethical approval for the study was obtained from the Ethical Review Committee of Bowen University Teaching Hospital, Ogbomoso. The ethical clearance protocol number of the study is BUTH/REC-2208. Informed consent was obtained from all participants following a clear explanation of the study's purpose, procedures, and potential risks and benefits. To ensure confidentiality, questionnaires were administered anonymously, and all collected data were securely stored and accessible only to authorized members of the research team.

Results

The mean age (± SD) of the study participants was 35 ± 10.872 years with the majority of respondents (34.0%) being within the age of 26-35 years. More than two-third (75.4%) of the respondents were females, while 24.6% were males. Half (50.8%) of the respondents had a secondary level of education. Majority (61.3%) of the respondents were full-time street vendors while, less than forty percent (38.7%) were part-time street vendors. Most (28.8%) have been street vendors for >10 years while more than ten percent (12.0%) have been street vendors for < 1 year. (Table 1)

The majority (73.3%) of the street vendors had learned about the effect of substance during pregnancy, and most (33.6%) got their information about the effect from family and friends. Over half (58.1%) of the respondents did not believe that substances have medicinal benefits to pregnant women, while 27.2% believed that they did. Most of the respondents (87.4%) were aware that some substances can be harmful to pregnant women and their babies, while 12.8% were not aware. Less than half (48.1%) of the respondents could currently select substances that can be harmful to pregnant women and their babies, while 51.8% could not. More than three Quater (82.7%) of the respondents believed that using substances during pregnancy is harmful to the baby, 6.3% did not believe, while 11.0% of the respondents were unsure. Over two-third (72.3%) had an overall good perception of substance use among pregnant women, while 53 (27.7%) participants had an overall poor perception. (Table 2)

More than half (51.8%) of the respondents had observed pregnant women purchasing substances. Some respondents (42.9%) thought some pregnant women use substances to cope with the challenges of pregnancy. However forty five percent had advised a pregnant woman against using substances,while 55.0% of the respondents had not advised a pregnant woman against using substances.

Table 1: Socio-Demographic Characteristics of Respondents (n= 191)

Variable	n	%
Age (Years)		
16-25	40	20.9
26-35	65	34.0
36-45	54	28.3
46-55	21	11.0
> 55	11	5.8
Mean age ±SD	34.80 ± 10.872	
Gender		
Male	47	24.6
Female	144	75.4
Level of Education		
No formal education	5	2.6
Primary education	24	12.6
Secondary education	97	50.8
Tertiary education	65	34.0
Occupation		
Full-time street vendor	117	61.3
Part-time street vendor	74	38.7
No of years		
< 1	23	12.0
1-3	37	19.4
4-6	51	26.7
7-10	25	13.1
>10	55	28.8

The major factors affecting the respondents' decision to sell substances to pregnant women were their beliefs that it's the woman's choice (62.8%), their lack of awareness of risks (4.3%), their social norms (4.3%), their fear of losing customers (22.3%), and their uncertainty about the consumer of the product being sold (6.4%).

The majority (56.0%) of the respondents were not willing to sell substances to pregnant women, while 39.8% were willing to sell. Most (39.3%) thought there is enough information available to vendors about risk of substance use during pregnancy, while 34.0% thought otherwise. More than two-third (73.3%) of the respondents would support initiatives to educate street vendors about risks of selling harmful substances to pregnant women, 11.0% stated they would not support initiatives to educate street vendors about risks of selling harmful substances to pregnant women, while 15.7% were unsure about joining such initiatives. (Table 3)

There was statistically significance relationship between occupation of the respondents and their overall perception of substance use among pregnant

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women ($\chi 2 = 6.246$, $p < 0.05$*) such that a higher percentage (82.4%) of respondents who were part-time street vendors had a better perception than the percentage of respondents who were full-time street vendors. (Table 4) However, there was no statistically significant relationship between the respondents' overall perception of substance use among pregnant women and other socio-demographic characteristics.

Lastly, there was statistically significant relationship between willingness of respondents to sell substances to pregnant women and religion ($\chi 2 = 6.641$, $p < 0.05$*) (Table 5)

Table 2: Respondents' Perception of use of substance among pregnant women (n= 191)

Variable	Frequency	Percentage
Have you ever heard about the effect of substance of Abuse in pregnancy		
Yes	140	73.3
No	51	26.7
Do you believe these substances have medicinal benefits in pregnancy		
Yes	52	27.2
No	111	58.1
Not sure	28	14.7
How perceived benefits about substances were communicated to pregnant women		
No communication about benefits	159	83.2
Verbal explanations	32	16.8
Aware that substances can be harmful to pregnant women and their babies		
Yes	167	87.4
No	24	12.8
Correctly mentioned substances that can be harmful to pregnant women and their babies		
Yes	92	48.1
No	99	51.8
Do you believe that using these illicit substances in pregnancy is harmful to baby		
Yes	158	82.7
No	12	6.3
Unsure	21	11

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Table 3: Respondents' willingness and perception towards substance use among pregnant women (N= 191)

Variable	Frequency	Percentage
Willingness to sell substances to pregnant women if requested		
Yes	76	39.8
No	107	56.0
Unsure	8	4.2
Think there is enough information available to vendors about risk of substance use during pregnancy		
Yes	75	39.3
No	65	34.0
Unsure	51	26.7
Would support initiatives to educate street vendors about risks of selling harmful substances to pregnant women		
Yes	140	73.3
No	21	11.0
Maybe	30	15.7

Discussion

This study assessed the perceptions and willingness of street vendors in Ogbomoso, Nigeria, to sell substances of abuse to pregnant women, providing a unique supply-side perspective on a public health challenge often examined from the demand side. The findings reveal that although most vendors recognized the potential harm of substance use during pregnancy, nearly two out of five were still willing to sell these substances to pregnant women. This contradiction highlights the complexity of balancing awareness with economic, cultural, and social pressures in informal market systems.

The majority of vendors were young women engaged full-time in street vending. This demographic profile aligns with existing reports that women dominate the informal trading sector in Nigeria and other low- and middle-income countries (LMICs), often due to limited access to formal employment opportunities. The finding that more than 70% of vendors had heard about the harmful effects of substances in pregnancy is encouraging, yet less than half could accurately identify specific harmful substances. This suggests a superficial awareness without depth of knowledge as demonstrated in some studies, which reported that general awareness of drug-related harms does not always translate to informed decision-making in local communities.[7,12]

While over 80% of vendors believed substance use during pregnancy is harmful to the fetus, almost 40% were still willing to sell these substances. Reasons cited included fear of losing customers, respect for buyers' personal choices, and religious influences. These findings underscore the strong role of economic survival and cultural beliefs in shaping vendor behavior, even in the face of perceived health risks. Similar observations have been reported in Ghana and Kenya, where informal sellers continued to distribute potentially harmful products despite awareness of their risks, citing livelihood dependence as the overriding factor.[7,13]

Interestingly, part-time vendors demonstrated significantly better perceptions of substance-related risks than full-time vendors. This may reflect reduced economic dependence on vending income among part-timers, enabling them to prioritize ethical concerns over financial gain. The finding aligns with theories of health behavior that emphasize how structural determinants such as poverty and unemployment can override individual risk perceptions in shaping actions.

Religion was found to be significantly associated with willingness to sell. Vendors who considered their religious values tended to refrain from selling to pregnant women. This highlights the moral and normative dimensions of substance use behaviors in Nigeria, where religious institutions play a central role in community values and health-related decision-making. Prior studies have demonstrated that religious affiliation strongly influences both health behaviors and commercial practices in Nigeria, particularly concerning sensitive issues such as alcohol and drug use.[14,15] Leveraging faith-based networks in public health interventions could therefore be a powerful

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strategy for reducing supply-side risks.

Table 4: Relationship between Sociodemographic characteristics and Perception of respondents on substance use among pregnant women

Variable	Overall Perception		Total	P-value	$\chi 2$
	Good	Poor			
	n= 138	n= 53			
Age in years					
16-25	32 (80.0)	8 (20.0)	40	0.788	43.072
26-35	44 (67.7)	21 (32.3)	65		
36-45	37 (68.5)	17 (31.5)	54		
46-55	14 (66.7)	7 (33.3)	21		
> 55	11 (100.0)	0 (0.0)	11		
Gender					
Male	39 (83.0)	8 (17.0)	47	0.059	3.578
Female	99 (68.8)	45 (31.3)	144		
Education level					
No formal	4 (80.0)	1 (20.0)	5	0.433	4.09
Primary	18 (75.0)	6 (25.0)	24		
Secondary	64 (66.0)	33 (34.0)	97		
Tertiary	52 (80.0)	13 (20.0)	65		
Religion					
Christianity	101 (72.7)	38 (27.3)	139	0.977	0.545
Islam	32 (69.6)	14 (30.4)	46		
Traditional	5 (83.3)	1 (16.7)	6		
Occupation					
Full-time	77 (65.8)	40 (34.2)	117	0.012*	6.246
Part-time	61 (82.4)	13 (17.6)	74		
No. of years					
<1	19 (82.6)	4 (17.4)	23	0.96	3.216
1-3	26 (70.3)	11 (29.7)	37		
4-6	33 (64.7)	18 (35.3)	51		
7-10	18 (72.0)	7 (28.0)	25		
>10	42 (76.4)	13 (23.6)	55		

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Table 5: Relationship between Sociodemographic characteristics and Willingness of respondents to sell substance of abuse use among pregnant women

Variable	Willingness to sell substances			Total	P-value	χ2
	Yes	No	Unsure			
	n= 76	n= 107	n = 8			
Age in years						
16-25	13 (32.5)	27 (67.5)	0 (0.0)	40	0.83	83.08
26-35	30 (46.2)	31 (47.7)	4 (6.2)	65		
36-45	22 (40.7)	30 (55.6)	2 (3.7)	54		
46-55	7 (33.3)	12 (57.1)	2 (9.5)	21		
> 55	4 (36.4)	7 (63.6)	0 (0.0)	11		
Gender						
Male	20 (42.6)	25 (53.2)	2 (4.3)	47	0.705	0.209
Female	56 (38.9)	82 (56.9)	6 (4.2)	144		
Education level						
No formal	2 (40.0)	3 (60.0)	0 (0.0)	5	0.723	2.498
Primary	10 (41.7)	12 (50.0)	2 (8.3)	24		
Secondary	41 (41.7)	52 (53.6)	4 (4.1)	97		
Tertiary	23 (35.4)	40 (61.5)	2 (3.1)	65		
Religion						
Christianity	61 (43.9)	74 (53.2)	4 (2.9)	139	0.033*	6.641
Islam	14 (30.4)	28 (60.9)	4 (8.7)	46		
Traditional	1 (16.7)	5 (83.3)	0 (0.0)	6		
Occupation						
Full-time	45 (38.5)	66 (56.4)	6 (5.1)	117	0.484	0.779
Part-time	31 (41.9)	41 (55.4)	2 (2.7)	74		
No. of years						
<1	9 (39.1)	14 (60.9)	0 (0.0)	23	0.542	13.471
2-4	19 (51.4)	17 (45.9)	1 (2.7)	37		
4-6	19 (37.3)	26 (51.0)	6 (11.8)	51		
7-10	8 (32.0)	17 (68.0)	0 (0.0)	25		
>10	21 (38.2)	33 (60.6)	1 (1.8)	55		

***P*-value <0.05* (significant)** **χ2 : Chi Square**

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Additionally, some vendors justified their willingness to sell based on cultural beliefs that certain substances, including alcohol and herbal mixtures, have medicinal benefits in pregnancy. This mirrors earlier reports from rural Nigerian communities where alcohol was believed to ease labor or correct fetal positioning, despite lack of scientific evidence.[16,17] These entrenched cultural beliefs perpetuate demand and normalize supply, creating a cycle that is difficult to break without targeted community-based education.

The findings carry significant implications for maternal and child health. The easy accessibility of substances through street vendors increases the likelihood that pregnant women—particularly those with limited access to formal healthcare—may continue using harmful products. This contributes to preventable complications such as preterm birth, low birth weight, stillbirth, and congenital anomalies, as documented in prior studies.[18,19]

From a supply-chain perspective, interventions that focus solely on pregnant women (demand-side) may have limited impact if the informal distribution networks remain unregulated and influenced by economic pressures. By highlighting the pivotal role of street vendors, this study contributes to shifting the narrative towards a more comprehensive approach that addresses both demand and supply in substance control.

The willingness of over 70% of vendors to support educational initiatives about the risks of substance use during pregnancy provides a critical entry point for intervention. Community-based programmes that engage vendors directly, coupled with faith-based and culturally tailored messaging, could strengthen their role as allies rather than enablers in maternal health promotion. Previous studies in low- and middle-income earning countries have shown that stakeholder-driven health education programs can lead to measurable reductions in harmful practices.[13,18]

Furthermore, regulatory policies should consider the informal sector when designing substance control strategies. While outright prohibition may be difficult to enforce, incentive-based programs (such as linking vendors to microfinance schemes or alternative livelihood training) could reduce economic dependence on the sale of harmful substances.

In Conclusion, our study demonstrates that while most street vendors in Ogbomoso acknowledge the harmful effects of substance use during pregnancy, economic hardship, cultural norms, and religious influences still drive decisions to sell such substances to pregnant women. Targeted health education, faith-based advocacy, and policies addressing economic vulnerabilities are essential to reduce supply-side availability of substances to pregnant women and to improve maternal and child health outcomes in Nigeria.

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