



Community pharmacists practice and perceived barriers towards pharmacovigilance in Enugu, Nigeria

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GSC Biological and Pharmaceutical Sciences, 2025, 31(02), 048-054

Publication history: Received on 14 March 2025; revised on 03 May 2025; accepted on 05 May 2025

Article DOI: <https://doi.org/10.30574/gscbps.2025.31.2.0173>

Abstract

Background: The science and activities relating to the detection, assessment, understanding, and prevention of adverse drug effects (ADRs) or any other drug-related problems is known as pharmacovigilance. It is a vital tool to monitor the safety, medication and reduce the likelihood of adverse drug event. Weak knowledge of PV has resulted in decreased awareness and reporting of ADRs. Community pharmacist as the first point of contact to the general public seeking medication and counseling, needs to be assessed of the extent of knowledge, attitude and practice to improve overall healthcare system.

Aim: To assess the knowledge, attitudes and Barriers of Pharmacovigilance amongst community pharmacists.

Method: A cross-sectional survey was conducted among community pharmacists in Enugu metropolis using a well structured questionnaire. Descriptive statistics were used to analyze the data including chi-square testing.

Result: Response to study was 96%. Pharmacist knowledge of Pharmacovigilance was high as 97.9% were familiar with the concept of PV and 66.7% have received formal training. The attitude to PV was positive as 95.8% agree that PV is essential in their practice and are willing to engage in further training on PV. There is poor practice of PV as less than half (52.1%) have never reported ADR and only 2.1% who knew where to report. Uncertainty about ADR being related to a drug and no knowledge on how to report were common barriers to reporting process.

Demographic data of respondents were statistically insignificant with the knowledge on PV among community pharmacists.

Conclusion: There was good knowledge and positive attitude towards pharmacovigilance but poor practice. However, *uncertainty* about the ADR being related to drugs, inadequate knowledge on how to report, and lack of time were cited as barriers that contributed to the poor practice.

Keywords: Pharmacovigilance; Practice; Community Pharmacists; Respondents

1. Introduction

Pharmacovigilance (Pv) is described as a vital component of the healthcare system by assessing, tracking, and discovering drug interactions and human impacts.(4). Medication use can result in adverse drug responses (ADR), which cause increased morbidity and health care consumption for patients and can be potentially lethal (6). The medical burden of Adverse effects from drugs is high. Hospitalization rates in Italy have increased as a result of ADRs, reflecting

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to the incidence of ADRs in 2008/2009 (7), emergency admissions in England increased by 53.4% in 2014/2015 (13). 3.6% of patients in France were hospitalized as a result of ADRs. A study conducted in Saudi Arabia (3) has an ADR incidence of 6.1 per 100 admissions. ADRs led to death rank sixth in the USA and seventh in Sweden, respectively. Five percent of deaths at a university central hospital in Finland were linked to drugs. It is important that when one takes a medicine one should know what to expect from it, in other words, that necessitates monitoring the safety of medicines even after being approved and available for use. PV focuses on constantly providing safe, effective use of drugs and protecting the patients from risk of hazards caused by the drug in real-world usage. The effectiveness of this system revolves on the active participation of the healthcare practitioners (9) and can be influenced by their knowledge, perceptions and attitudes.

PV is concerned with identifying the hazards associated with pharmaceutical products and minimizing the risk of any that may come to patients (wikipedia, 2006). When a pharmaceutical drug is put in the market, there are still many things that are unknown about the safety of the new medication. It makes sure drug safety profiles are updated and accessible regularly, which has helped with monitoring of commercial drugs. It has helped to promote the sensible, logical, and more effective use of various medications, including cost-effectiveness (11) and permits the prompt removal or restrictions of dangerous drugs from circulation thereby preserving the general public health. Most countries incorporate national pharmacovigilance systems into their public health and healthcare strategies. The community pharmacists are constantly the initial port of call for patients seeking guidance, thereby placing them in a viable position towards pharmacovigilance, but are often inconsistent and underutilized.

Keeping this in mind, our study aimed to evaluate the community pharmacists practice and perceived barriers towards pharmacovigilance in Enugu, Nigeria.

2. Material and Methods

The study was a descriptive cross-sectional study carried out amongst the registered community pharmacists using well structured questionnaire from 1st July 2024 through September 2024, in Abakpa-Nike area of Enugu State. Abakpa-Nike is located in Enugu east local government area of Enugu State, and it is the largest and most densely populated suburb of Enugu city (12).

The eligible participants are the registered pharmacists practicing in Abakpa-Nike area and gave consent to participate in the study.

The participants were selected with use of judgemental sampling technique since there was no available data on the number of pharmacists practicing in the area.

The questionnaire that comprised 2 sections A and B, were distributed and retrieved. Section A contained the participants demographics, and Section B contained questions on their practice and perceived barriers to render pharmacovigilance services.

All data retrieved were coded, entered into excel spreadsheet, analyzed using statistical package for social science version 23.0. P value less than 0.05 was considered statistically significant.

Ethical approval (Ref: ESUT/HREC/2024/254) was sought and obtained from the health research ethics committee of Enugu State University Teaching Hospital, parklane, Enugu. Participants were made aware that participation was voluntary and they had the right to refuse or discontinue and the investigator can terminate if the participant met an exclusion criterion.

3. Results

Forty eight community pharmacists participated in the study with equal number of both gender. Majority (60.4%) of them fall within the age brackets of 25 and 34 years, followed by 35 - 44 years (18.8%), under 25 years (16.7%) while those within 45 - 54 years had the least (4.2%). The highest educational qualifications of the respondents were bachelor of Pharmacy degree (79.2%) and Doctor of Pharmacy (20.8%). The respondents' years of experience were ordered to; less than one (27.1%), between one year and five years (47.9%), six years to ten years (20.8%), eleven to fifteen years (4.2%). [Table 1].

Table 1 Socio-demographic characteristics of the respondents

Variable	N (%)
AGE	
Under 25	8 (16.7)
25-34 years	29 (60.4)
35-44 years	9 (18.8)
45-54 years	2 (4.2)
55 years and above	0 (0)
Total	48 (100)
GENDER	
Male	24 (50)
Female	24 (50)
Total	48 (100)
HIGHEST EDUCATIONAL QUALIFICATION	
Bachelor of Pharmacy (B.Pharm)	38 (79.2)
Doctor of Pharmacy (Pharm.D)	10 (20.8)
Master of Pharmacy (M.Pharm)	0 (0)
Doctor of Philosophy (Ph.D)	0 (0)
Other (please specify)	0 (0)
Total	48 (100.0)
YEARS OF EXPERIENCE	
Less than 1 year	13 (27.1)
1-5 years	23 (47.9)
6-10 years	10 (20.8)
11-15 years	2 (4.2)
More than 15 years	0 (0)
Total	48 (100)

Table 2 shows that slightly above half (52.1%) of the respondents were somewhat familiar with the concept of pharmacovigilance, 45.8% were very familiar with the concept while 2.1% were not familiar. In addition only 66.7% had received formal training on pharmacovigilance. Among those that have received the training, majority (59.4%) asserts that they were trained in the university /college, 28.1% only had workshops/seminar trainings, 9.4% were trained in their workplace and the rest were through online courses. In response to the question on what best describes pharmacovigilance 25% answered monitoring the safety of medicines, 29.2% responded that it was to report adverse drug reactions, 2.1% responded to ensure the efficacy of medicines and 43.8% responded all of the above. Finally on who to report ADR, 2.1% responded medicine manufacturers, 14.6% patient and caregivers, 18.8% responded pharmacists only while 64.6% responded that it is the duty of everyone.

Table 2 Responses of community pharmacists on pharmacovigilance

Variable	Response	F (%)	Mean response	SD
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How familiar are you with the concept of pharmacovigilance?	Very familiar Somewhat familiar Not familiar	45.8 52.1 2.1	1.563	.542
Have you received any formal training in pharmacovigilance?	Yes No	66.7 33.3	1.333	.476
If yes, where did you receive the training?	University/College Workplace Workshops/Seminars Online courses Others	59.4 9.4 28.1 3.1 0	1.750	.984
Which of the following best describes pharmacovigilance?	Monitoring the safety of medicines Reporting adverse drug reactions Ensuring the efficacy of medicines All of the above	25.0 29.2 2.1 43.8	2.646	1.280
What is the primary goal of pharmacovigilance?	To identify the adverse effects of medications To prevent medication errors To promote the safe use of medicines To ensure medication efficacy	77.1 2.1 20.8 0	1.438	.823
Who should report Adverse Drug Reactions?	Medicine Manufacturers Patients and caregivers All of the above Pharmacists only	2.1 14.6 64.6 18.8		

Key: F = Frequency, SD=Standard deviation, N= number of respondents

Table 3 Response of community pharmacists on pharmacovigilance (cont'd)

Variable	Response	F (%)	Mean response	SD
Have you ever reported an adverse drug reaction (ADR)?	Yes No	47.9 52.1	1.521	.505
How often do you encounter adverse drug reactions in your practice?	Daily Weekly Monthly Rarely Never	0 0 8.3 81.3 10.4	4.021	.437
What barriers do you face in reporting ADRs? (Tick all that apply)	Lack of time Lack of knowledge on how to report Uncertainty about the ADR being related to the drug Fear of legal repercussions Other (please specify)	28.6 34.7 55.1 0 0		

Do you think the current system for reporting ADRs in your pharmacy is effective?	Yes	31.3	2.021	.812
	No	35.4		
	Not sure	33.3		

Key: F = Frequency, SD=Standard deviation, N= Number of respondents

Table 3 shows that there is no statistical significant differences in their responses on questions that includes: how they see pharmacovigilant important in their practice (.505), if they agree that reporting ADR can improve patients safety (.437), if they are willing to participate in further training on pharmacovigilance (.812).

Table 4 shows that there is no statistical significant difference on how important they think pharmacovigilance in their practice (.320), while there was a significant statistical differences in responses on: if they agree that reporting ADRs can improve patients safety (<0.001), and if they would be willing to participate in further training on pharmacovigilance (<0.001).

Table 4 Responses of community pharmacists on pharmacovigilance (cont'd)

Variable	Response	F (%)	Mean response	SD	Remark
How important do you think pharmacovigilance is in your practice?	Very important	95.8	1.063	.320	
	Important	2.1			
	Neutral	2.1			
	Not important	0			
Do you agree that reporting ADRs can improve patient safety?	Strongly agree	48	1.000	<.001	
	Agree	0			
	Neutral	0			
	Disagree	0			
	Strongly Disagree	0			
Would you be willing to participate in further training on pharmacovigilance?	Yes	100	1.000	<.001	
	No	0			
What suggestions do you have for improving pharmacovigilance practices in your Pharmacy?	Create avenue for reporting of ADR	12.5			
	Education on Pharmacovigilance	43.8			
	Effective follow up	20.8			
	Easy reporting procedure of ADR	20.8			
	Improved medium to identify ADR	2.1			

Key: F = Frequency, SD=Standard deviation, N= Number of respondents

4. Discussions

Pharmacists' knowledge on PV was adequate as 97.9% were familiar with the concept of PV. This is similar to recent studies conducted separately in Nigeria and Jordan where the respondents show good knowledge of PV (1,2). Another survey in south India showed inconsistency with the above studies, in that case, the respondents had poor knowledge of PV (10).

Positive attitude regarding PV was high. 95.8% of the respondents agrees that PV is very important in their practice as health care providers. All the respondents agree that reporting ADRs can improve patient safety and that they are also willing to engage in further training of community pharmacists on PV. This result is consistent with previous studies in Lagos Nigeria where as much as 90% of respondents believed that PV is important in their practice and that they are willing to engage more in PV if they are trained (8). Key barriers to ADR reporting and PV practices identified by

community pharmacists were varied, with majority (55%) as uncertainty about the ADR being related to the drug. A similar study of community pharmacists in the eastern part of Nigeria indicated that there's insufficient knowledge of pharmacotherapy in detecting ADR but contrary to these studies respondents (96%) in South Africa are able to recognize ADR in their daily practice. (5).

5. Conclusion

There was good knowledge as majority of pharmacists are familiar with the concept of PV, poor practice because more than half have never reported any ADR but are willing to participate in further training and education which will improve the involvement in PV. However, uncertainty about ADR being related to the drug and lack of knowledge on how to report are barriers facing PV practices.

Recommendations

In other to improve the level of PV practice among community pharmacists, there's need for educating, training and retraining of pharmacists on the importance, procedure answers for reporting ADRs, improve avenues to identify ADRs, encourage patient follow-ups and feedbacks.

All the factors as suggested by the community pharmacists will strengthen PV awareness and practice.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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