Original Article

Ethics of Pharmacy Practice: Ethical Principles Knowledge and Perceived Ethical Practices of Community and Hospital Pharmacists in Nigeria

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ABSTRACT

Background: Professions and occupations are distinguished by ethical obligations and guidelines. The objectives of the study were to assess the ethical principles knowledge and perceived ethical practices of community and hospital pharmacists in Nigeria. **Materials and Methods:** This cross-sectional survey was conducted among the community and hospital pharmacists in Nigeria. A validated web-based instrument was used for data collection. Study data were initially summarized using descriptive statistics, while ethical principles' knowledge levels of the community and hospital pharmacists were compared using the Pearson chi-square test. A statistically significant level was set at $p < 0.05$. **Results:** Of 300 pharmacists that were approached, 245 completed the survey (response rate = 81.7%). The overall mean knowledge score of the respondents is 2.68 ± 1.49 out of a maximum score of 7 points. Over half (68.2%) of the respondents were accessed for ethical information at their pharmacies, while only 3.3% documented ethical concerns very often. **Conclusion:** This survey revealed poor knowledge of ethical principles among the respondents. Documentation of ethical concerns was also very poor. Therefore, educational and workplace reorganizational interventions are recommended to promote high-quality pharmaceutical care delivery.

Keywords: Community pharmacists, Hospital pharmacists, Nigeria, Ethics, Pharmacy practice.

INTRODUCTION

Pharmacists' primary focus is shifting from products to patients around the world.[1-4] A trend towards increasing patient-centered pharmaceutical services may suggest increasing emergence of new ethical issues as more pharmacists adopt more clinically oriented practice. Higher levels of patient care are predicted to result in a greater number of ethical dilemmas.[5] Despite this paradigm shift in pharmacy practice globally, little attention has been paid to ethics in pharmacy practice.[6]

The international best practice of pharmacy is founded on morals, ethics, and law. The philosophical foundation for laws, rules, and regulations is ethics. The science of morals is known as ethics. It is a framework, a systematic and reasoned basis for making moral statements.[7] In other words, ethics is a more developed form of morality and thus more sophisticated than morals. While almost anything can be morally supported, ethics emphasizes the social system in which those morals are applied. As a result, reason is required to justify one's actions ethically. Professionally, the term ethics refers to the

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standards or codes of behaviour that are expected by a group to which an individual belongs. It is a criterion below which an individual is not permitted to fall, otherwise, risks social exclusion.

Pharmacy ethics is defined as a set of moral concepts that shape the practice decisions of pharmacists.[7-9] Apart from a code of ethics for pharmacists, pharmacists should also adhere to the main bioethical principles (beneficence, non-maleficence, autonomy, and fairness), which constitute the foundation of clinical pharmacy services.[10-12] These ideals serve as the foundation for an ethical framework in which responsibility can be recognized.[11,12] Interestingly, in October 2012, the International Pharmaceutical Federation (FIP) and its 127 member organizations reaffirmed their long-standing interest in ethical considerations in pharmacy practice, encouraging pharmacists to uphold the highest standards of professional conduct, and putting patients and society first at all times.[13]

Community pharmacists provide direct oversight to community pharmacies. Supply chain management and logistics, medication filling, patient education and counselling, and public health services are all common responsibilities of Nigerian community pharmacists. On the other hand, the predominant functions of Nigerian hospital pharmacists are drug procurement, compounding, filling, and counselling. A few hospitals offer patient-centered pharmacy services with an emphasis on the appropriate use of drugs, and pharmacovigilance, among others. However, due to some barriers, Nigerian hospital pharmacy practice has not seen many specialized clinical pharmacy services. These barriers include medical dominance and opposition, pharmacist's diffidence, inadequate personnel, underutilization of supportive staff, absence of clinical career structures and clinical pharmacy practice supportive policies.[14]

Nigerian hospital pharmacists fill prescriptions generated within hospitals, whereas community pharmacists stock nearly every drug because they are likely to receive prescriptions from multiple hospitals. There is always a spillover of prescriptions to community pharmacies due to the out-of-stock syndrome prevalent in most hospitals and government-owned health institutions. Conflicts of morals and law may arise more frequently in the discharge of the community pharmacist's professional duty because of the attempt to meet the various needs of clients, patients, hospitals, and the community. Community pharmacists, like hospital pharmacists, must follow best practices when filling prescriptions, providing drug counseling, and participating in other public health activities.

According to a review of literature, the ability of British pharmacists to recognize and describe ethical issues varies widely.[15] Slowly but surely, Croatian pharmacy ethics have developed, and research findings suggest that helping pharmacists make ethical decisions is necessary.[16] The need for the implementation of an ethical code for pharmacy practice was highlighted in Saudi Arabia.[17] A study conducted in Iran looked at pharmacists' attitudes toward bioethical concepts and emphasized the need for more study in the area of pharmacy ethics.[18] Another Iranian study identified ethical challenges of pharmacy practice.[19] Also, a study assessed community pharmacists' ethical practices in Jordan.[20] Views of community pharmacists on ethical dilemmas was investigated in India.[21] In Serbia, the difficulty and incidence of ethical problems that arise in community pharmacies were assessed.[22] It is noteworthy that none of these studies had attempted to determine the ethical knowledge and practices of community and hospital pharmacists. Moreover, there has been a scarcity of previously published studies that have investigated the ethics of clinical pharmacy practice in Africa. The study aimed to assess the ethical principles knowledge and perceived ethical practices of community and hospital pharmacists in Nigeria.

MATERIALS AND METHODS

Study Design and Setting

This cross-sectional, national online survey included community and hospital pharmacists in Nigeria.

Sample Size

The sample size was determined using an estimated number (20,000) of current active practicing community and hospital pharmacists in Nigeria. The Raosoft® online sample size calculator was utilized,[23] using a 5% margin of error, 90% confidence level, and a response distribution of 50%. The minimum sample size required for the survey was 267. The determined sample size was validated with another online calculator (Calculator.net).[24]

Sampling and Eligibility Criteria

Community and hospital pharmacists practicing in Nigeria that are members of pharmacists' association's WhatsApp groups of various States were conveniently selected.

Study Instrument

Following a thorough evaluation of previous publications on ethics of pharmacy practice, the study questionnaire

was developed.[6,16-18,20] Two pharmacists with research experience in ethics conducted the face validity (assessed the questionnaire for readability, understandability, and design). The questionnaire was updated based on the results of the face validation, and the generated 13-item (5-item knowledge, and 8-item practice) questionnaire was used for the pilot study. Twenty pharmacists that were not part of the main study were used for the pilot study.

Data Collection

Before participating in the study, potential respondents were asked for their consent after reading the information statement. Only pharmacists who agreed to participate by checking the informed consent field had access to the survey questions.

The data were collected between May and September 2021 using an online Google form via email and WhatsApp. After receiving no more responses for three weeks, the portal was shut down. The data collected included respondents' demographic, and ethics knowledge and practices information.

Data Processing

The study population's age distribution was used to divide the respondents' ages into three levels. For knowledge items, every correct response received one point, while an incorrect response received zero. The mean ethics principles knowledge score was determined from the correctly answered knowledge questions. The overall knowledge score is the sum of the correct answers to each question, yielding scores ranging from 0 to 5, with 5 indicating the highest level of knowledge. According to Bloom's cut-off point, overall knowledge was rated as high if it was between 80 and 100 percent (four to five points), moderate if it was between 60 and 79 percent (three points), and low if it was less than 60 percent (less than three points).[25]

Data Analysis

The data from each respondent were coded and entered into the International Business Machine (IBM) Statistical Products and Services Solution version 21 (Chicago, IL, United States of America) for windows, which was used for statistical analysis. Initially, descriptive statistics such as percentages, means, and frequency distribution were used to summarize the study's data. Ethical principles' knowledge levels of the community and hospital pharmacists were compared using the Pearson chi-square test. The independent samples t-test was used to compare the mean scores of the two practice settings. Significant values were defined as those with probabilities less than 0.05.

RESULTS

Reliability of the Study Instrument and the Background Characteristics of the Respondents

The questionnaire's average Cronbach's alpha score was 0.68, with knowledge scoring 0.63 and practices scoring 0.73. Two hundred and forty-five out of the 300 pharmacists invited to participate in the survey completed it, yielding a 81.7% response rate (Figure 1).

The mean age of the respondents was 35.6 ± 9.2 years (range 23 - 69 years). The majorities (62.0%) of the respondents were males, 70.3% had undergraduate degrees as their highest qualification, 60.0% were from the hospital setting, and 67.4% had practiced pharmacy for less than 11 years. An overwhelming majority of the respondents (94.3%) received ethics education during their undergraduate pharmacy program, and about one-half (53.1%) had previous continuing education on ethics of pharmacy practice (Table 1).

The Ethical Principles Knowledge of the Respondents

One hundred and sixty-four (66.9%) respondents correctly identified the ethical principles guiding "not disclosing emergency contraceptive usage of a client to parents" One hundred and forty-nine (60.8%) of the respondents correctly identified an ethical principle guiding "respecting patient wishes to not take a particular medicine prescribed for him/her". Fifty-eight percent of the respondents knew that ethics is not the same as law. Fewer than 50% of the respondents got the correct

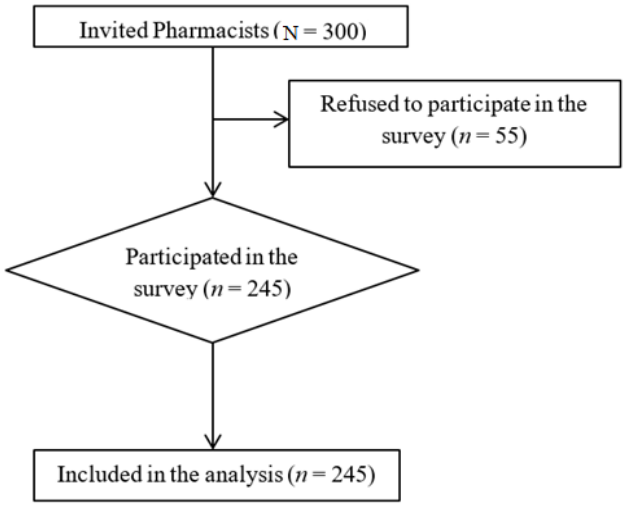

Figure 1: CONSORT flow chart of the study.

Table 1: Background characteristics of the respondents.

Variable	n (%)
Age (years)	
<30	75 (30.6)
30-40	115 (46.9)
>40	55 (22.5)
Sex	
Female	93 (38.0)
Male	152 (62.0)
Highest qualification	
Undergraduate degree	172 (70.3)
Postgraduate	73 (29.7)
Practice setting	
Hospital	147 (60.0)
Community	98 (40.0)
Years of practice experience	
0 – 10	165 (67.4)
11-20	52 (21.2)
>20	28 (11.4)
Received undergraduate pharmacy ethics education	
No	14 (5.7)
Yes	231 (94.3)
Received previous continuing education on ethics of pharmacy practice	
No	115 (46.9)
Yes	130 (53.1)

ethical principles guiding the remaining scenarios as shown in Table 2.

The overall knowledge score and knowledge levels of the respondents

The mean overall ethics knowledge score of the respondents is 2.5 ± 1.1 out of a maximum score of 5 points (2.5 ± 1.1 among hospital pharmacists vs. 2.6 ± 1.2 among community pharmacists, $p = 0.352$). In Figure 2, the analysis of respondents' levels of ethics knowledge indicated that a high proportion (49.4%) of them had low knowledge. According to practice settings, a higher proportion of hospital pharmacists had a low knowledge compared with community pharmacists (51.0% vs. 46.9%) with no statistically significant difference ($p = 0.536$).

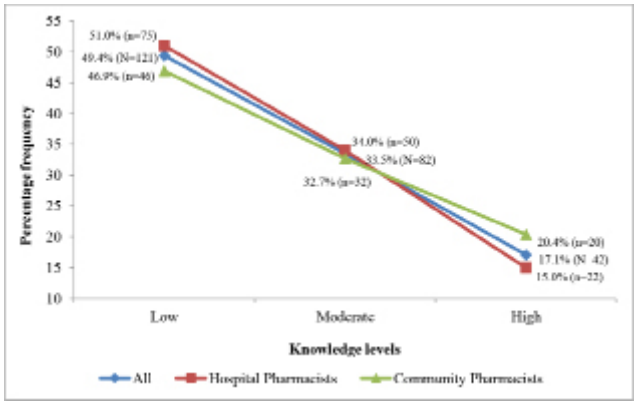

Figure 2: The knowledge levels of the respondents.

Table 2: Ethical Principles Knowledge of the respondents.

Knowledge Items	Ethical principles					
	Autonomy n (%)	Beneficence n (%)	Confidentiality n (%)	Justice n (%)	Non-maleficence n (%)	Correct response N (%)
Respecting patient wishes to not take a particular medicine prescribed for him/her	**149 (60.8)**	16 (6.5)	8 (3.5)	16 (6.5)	56 (22.9)	149 (60.8)
Dispensing a one-month free antiretroviral medicine as against three months prescribed for a HIV patient because of low stock levels	60 (24.5)	26 (10.6)	2 (0.8)	**55 (22.4)**	102 (41.6)	55 (22.5)
Not disclosing emergency contraceptive usage of a client to parents	**70 (28.6)**	3 (1.2)	**94 (38.4)**	16 (6.5)	62 (25.3)	164(66.9)
Not dispensing an expired medicines to a patient	65 (26.5)	**20 (8.2)**	6 (2.4)	69 (28.2)	**85 (34.7)**	85 (34.7)
	No n (%)	Yes n (%)				
Ethics is the same as law	**142 (58.0)**	103 (42.0)	-	-	-	142 (58.0)

Bold = correct response.

Table 3: The perceived ethical practices of the respondents.

Practice item	Never n (%)	Rarely n (%)	Sometimes n (%)	Often n (%)	Very often n (%)
Discussing ethical issues with your patients/clients	9 (3.7)	55 (22.4)	86 (35.1)	77 (31.4)	18 (7.3)
Discussing ethical issues with physicians	22 (9.0)	93 (38.0)	82 (33.5)	37 (15.1)	11 (4.5)
Documenting ethical concerns in your pharmacy	38 (15.5)	94 (38.4)	70 (28.6)	35 (14.3)	8 (3.3)
	Self-initiated	Patient-initiated	One-time discussion	Ongoing discussion	
#Ethical issues discussion with your patients is	169 (37.8)	142 (31.8)	66 (14.8)	70 (15.7)	
	Self-initiated	Physician-initiated	One-time discussion	Ongoing discussion	
#Ethical issues discussion with physicians is	131 (38.3)	80 (23.4)	70 (20.5)	61 (17.8)	
	Books	Brochures	Websites/ databases	Fellow pharmacist	
#Ethical reference readily available in your pharmacy	149 (46.0)	9 (2.8)	166 (51.2)	-	
#Ethical resource helpful in caring for your patients /clients	157 (28.6)	64 (11.7)	177 (32.2)	151 (27.5)	
	Lack of time	Lack of reliable resources	Lack of interest	Lack of ethical knowledge	Lack of reimbursement
#Barriers that limit you from explaining ethical issues to your patients /clients	116 (39.5)	59 (20.0)	30 (10.2)	35 (11.9)	54 (18.4)

#Multiple responses were allowed.

The Perceived Ethical Practices of the Respondents

Over half (68.2%) of the respondents reported that they were accessed for ethical information at their pharmacies. Eighty-six (35.1%) of the respondents reported that they discussed ethical issues sometimes with their patients/clients, while 38.0% rarely discussed ethical issues with physicians in their practice settings. The study results also indicated that only 3.3% of the respondents documented ethical concerns very often in their pharmacy, 38.4% rarely documented, while 15.5% never did at all (Table 3).

DISCUSSION

Ethics is a major tool for character building in a profession. Ethical obligations and guidelines distinguish professions from occupations. A low level of ethical principles knowledge was noted among our study respondents, especially hospital pharmacists. While documentation of ethical issues was also very poor, lack of time and reliable ethical resources were the most frequently cited obstacles preventing pharmacists from discussing ethical issues with their patients or clients.

The present study revealed very low ethical principles knowledge among the respondents despite an overwhelming proportion of them that agreed that they had ethics education during their undergraduate pharmacy programmes. This finding highlights the inadequacies of the undergraduate pharmacy ethics syllabi,[26,27] and the mandatory continuous professional development education (MCPDE) programme for pharmacists in Nigeria. It is important to note that the best clinical pharmacy practices in the world today place a high value on practice ethics, and pharmacy students need to receive education on a variety of pharmacy practice ethics topics.[26] As a result, pharmacy schools have a critical role because undergraduate pharmacy education in Nigeria now focuses more on legal rather than ethical aspects of pharmacy practice. Therefore, establishing a separate pharmacy ethics course to improve pharmacy ethics education is crucial to making sound ethical decisions and providing pharmaceutical care after graduation. For pharmacy practitioners, an improved MCPDE programme on pharmacy practice ethics would be a valuable strategy to improve their pharmacy ethics knowledge.[17,20,28] In other words, improved pharmacy ethics knowledge and understanding can help prevent some ethical issues or resolve them professionally when they occur in the community and hospital pharmacies in Nigeria. This highlights the importance of ethics educational intervention programs among community and hospital pharmacists n Nigeria to raise the standard of pharmaceutical care provided to patients.

Mandatory continuous professional development education as a life-long learning programme can provide high professional competence, ethical standards, and moral obligations to meet the profession's trust.

A significantly higher proportion of the respondents from the community practice setting reported that they had been consulted for ethical information compared to those from the hospital setting. Higher accessibility of community pharmacies by community members compared to hospital pharmacies may partly explain this finding. Overall, only a few respondents reported that they discussed ethical issues with patients and physicians very often. This may be due to low pharmacy ethics knowledge among our respondents which may culminate in fear of exposing their ethical ignorance and incompetence. This underscores the importance of ethics educational interventions among clinical pharmacists in Nigeria to brace up with global best clinical pharmacy practice. Also, the present study revealed that a very low proportion of the respondents documented ethical concerns in their pharmacy similar to the finding of a previous study.[17] Because a system of documentation is a crucial component required for the provision of pharmaceutical care, this result is a reflection of a low level of implementation of pharmaceutical care in Nigeria.

The availability of reliable ethical information resources for pharmacists and training on their use are crucial. In addition to teaching pharmacists where to find ethical information and how to apply it, education in pharmacy ethics teaches them how to make appropriate decisions before making recommendations and informing their patients.[16,17,28] In this regard, most respondents reported having ethical information resources in their practice settings. However, the majority of these respondents turned most greatly to internet websites/databases followed by books to find ethical information. These findings are in agreement with that of a similar study conducted in Saudi Arabia.[17] Also, our finding is comparable to that of another similar study conducted among community pharmacists in Jordan which reported internet websites followed by consultation services by fellow pharmacists.[20] The easy availability and accessibility of the ethical information sources could explain these findings.

The present study identified a number of obstacles that prevent pharmacists from talking with patients about ethical issues. Lack of time was the most frequent obstacle mentioned by the respondents. Over-engagement in stock management and medicine dispensing activities by the community and hospital pharmacists in Nigeria could partly account for this finding. Also, inadequate personnel could be another probable reason because maintaining everyday operations of a pharmacy with a small workforce will always be difficult. Nevertheless, this finding corroborates the findings of similar studies done elsewhere.[17,20,29]

Strengths and Limitations of the Study

To our knowledge, this is the first study conducted in Nigeria and Africa at large to assess ethics in pharmacy practice. Secondly, the inclusion of both community and hospital pharmacists in this survey makes it unique and outstanding. However, this study had some limitations. The main drawbacks of the study were its small sample size and selection biases brought on by respondents' convenience sampling, which may not have accurately represented all of Nigeria's active community and hospital pharmacists. Additionally, the cross-sectional study design of the present study made it impossible to track changes in respondents' practices and knowledge over time.

CONCLUSION

This study revealed very low ethical principles knowledge among the respondents, likely caused by poor pharmacy ethics syllabus and teaching in the undergraduate pharmacy programme and inadequacy of the contents of the MCPDE programme in Nigeria. Thus, the need for educational interventions such as ethics seminars, workshops, and an improved MCPDE programme with enriched ethics content could improve the ethical principles knowledge of Nigerian pharmacists. For future pharmacists, revision of the undergraduate pharmacy education curriculum to include an enriched ethics syllabus is recommended. The practice of the respondents with regard to documentation of ethical concerns was very poor, while lack of time was the most common barrier limiting pharmacists from discussing ethical issues with patients. These findings underscore the need for the re-engineering of community and hospital pharmacies in Nigeria to help free up pharmacists' time for clinical pharmacy services.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ABBREVIATIONS

FIP: International Pharmaceutical Federation; **IBM:** International Business Machine; **MCPDE:** Mandatory continuous professional development education.

SUMMARY

A trend towards increasing patient-centered pharmaceutical services may suggest that pharmacists encounter new ethical concerns as more pharmacists become more clinically oriented. Despite this paradigm shift in pharmacy practice globally, little attention has been paid to ethics in pharmacy practice. Thus, the need to assess the ethical principles knowledge and ethical practices of community and hospital pharmacists in Nigeria. There was a very low level of ethical principles knowledge among the study respondents, while the practice of the respondents with regard to documentation of ethical concern was also very poor. These findings highlight the need for educational and workplace reorganizational interventions.

Ethics Approval

Ethical approval for the survey was granted by the Research Review Board of the Faculty of Pharmacy, University of Maiduguri, Nigeria.

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