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Community Pharmacies, Extent of Services, and Preparedness for Primary Health Care Policy Implementation in Nigeria from 1980 to 2022: A Narrative Review

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Abstract

To attain the goal of universal health coverage it is imperative to effectively utilize all healthcare resources and personnel. However, a significant obstacle to achieving this objective is the lack of comprehensive wholistic up to date information on primary healthcare services and the extent to which community pharmacies participation. To effectively plan, implement, and evaluate the primary healthcare (PHC) contributions of community pharmacists in Nigeria, it is necessary to understand the factors that need to be considered as evidents from several studies and publications on the subject matter. This investigation will help in promoting policy implementation for proper integration of community pharmacy services in PHC services. This study investigated and narratively reviewed the published studies that focused on the services offered and the level of readiness of community pharmacies in implementation of the PHC policy in Nigeria. A comprehensive search of PubMed and Google Scholar was carried out using appropriate keywords for articles published in English Language between 1980 and 2022 and focused on community pharmacies across Nigeria. The articles selected for the review were analyzed based on their relevance to the study objectives. Data extraction was done using keywords and boolean operators in series and parallel to search the data bases. A standardized profoma was used to extract information on the key variables from the sellected studies. The analysis included the application of descriptive statistical techniques such as frequency and percentage, and a comparative evaluation that utilized the Oxford and Scottish Benchmarks for Study Standard. A total of 34 articles were utilized in the study that covered all the six geopolitical zones of Nigeria. The outcome of this review shows that studies conducted in the south-east region had the highest frequency, accounting for 27% (nine articles) of the total. Meanwhile, the incidence of research conducted in the south-west, nationwide, south-south, north-central, and north-west regions was 21.05% for each region. Moreover, the north-east and north-west regions had similar numbers recorded as 24%, 21%, 18%, 9%, and 2%, respectively. The investigations were designated to the inferior portion of the Oxford and Scottish standards for study classifications. The study reveals that community pharmacies have evolved over the years, expanded their services beyond dispensing medications to include health promotion, disease prevention, and medicationtherapy management services.

Keywords: Community Pharmacies; Primary healthcare; Policy; Review; Public health; Nigeria.

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Introduction

Community pharmacies are healthcare facilities that operate within the private sector and are supervised by registered pharmacists. They provide various primary healthcare [PHC] services, in addition to dispensing prescribed medications as their traditional function [1]. According to the FIP in (2015), pharmacists that work within the community are positioned in convenient locations that are easily accessible to people in their daily lives. Community pharmacies play a critical role in the provision of primary healthcare services in Nigeria [2]. It has been reported that in Nigeria, most of community pharmacies are characterized as independent retail stores and are classified as small to medium enterprises, comprising more than 90% of the total number [3]. The services of community pharmacists in the PHC development services have been largely under studies. Many community pharmacists operate independently from the country's primary health care system, causing a disconnect and hindering efforts towards achieving universal health coverage. Along with shortages in staffing and access to primary health care, there is also a lack of evidence on how community pharmacists can contribute to primary health care [4]. As the country continues to grapple with a high burden of communicable and non-communicable diseases, community pharmacies have become an essential part of the healthcare system. The Nigerian government has recognized the importance of community pharmacies in providing accessible and affordable healthcare services to its citizens, and as such, has implemented several policies aimed at improving their operations. The success of primary healthcare interventions facilitated by community pharmacists is heavily influenced by contextual factors both inside and outside of the practice setting. Despite being poorly comprehended currently; these factors significantly contribute to the clients' acceptance of PHC services in localized practice settings [5]. In Nigeria, particularly in rural areas, there is a shortage of adequate healthcare services. One factor contributing to this issue is healthcare professionals failing to involve the community in planning and implementing services, resulting in very little community input. Although pharmacists throughout the country perform primary healthcare roles, little attention has been given to measuring their impact on services and the implementation of PHC policies. Research conducted in Lagos showed that community pharmacists have not been effectively integrated into the PHC programs, with only 41% of program items involving them. The top areas of their involvement were found to be the supply of essential drugs and vaccines, oral rehydration therapy, and family planning [6]. This narrative review examined the extent of services provided by community pharmacies in Nigeria from (1980) to (2022) and assess their preparedness for the implementation of primary healthcare policies.

Methods

Study area: The study area for this review comprised community pharmacies engaged in delivery of primary health care services in all the six geopolotical zones of Nigeria.

Review question: What is the extent of services and preparedness of community pharmacies towards the implementation of PHC in Nigeria? The review explored community pharmacists involvement in PHC services in Nigeria.

Types of studies and study populations included in the research review: PubMed and Google Scholar were utilized for the search of studies associated with extent and level of community pharmacy services towards PHC implementation in Nigeria. In order to obtain studies that met the inclusion criteria and focused on the study objectives, a manual search was also conducted. This comprehensive search approach was employed to ensure the retrieval of relevant studies.

Inclusion criteria

1. Research conducted in Nigeria examining the contributions and amenities provided by community pharmacies towards the establishment of primary healthcare services, without regard to any specific geographic location.
2. Quantitative, qualitative, and mixed studies that were peer-reviewed papers published in the English Language.
3. Research investigations that followed structured procedure and study design, whether involving experimentation or not.
4. Research done with no potential bias or personal benefit mentioned.
5. Studies that offers additional insights regarding the level of participation of community pharmacies in primary health care initiatives in Nigeria.
6. Research studies that have a well-defined and explicitly explained research methodology.

Exclusion criteria

1. Related studies without clearly stated sample size, study location, data collection method and dates of study constituted methodological flaws for elimination.
2. Published studied that lacked specific information on their time frame, extent, the number of participants, and geographical scope were eliminated.
3. Studies with insufficient data.

Study design: The research provided a summary of the range of services and readiness level of community pharmacies in Nigeria when it comes to PHC implementation, using a narrative approach.

Risk of bias: Prior to selecting the studies, reporting bias and bias in the selection of subjects and samples were evaluated through face and content validation. Two independent reveiwers assessed the studies and resolved all descrepancies based on agreed merits and limitations. However, specialized tools were not used since the study was not a systematic review.

Condition and domain studied: Articles and publications that examined the extent and preparedness level of community pharmacies towards the implementation of PHC in Nigeria.

Information source: The search was performed using PubMed and Google Scholar while the data retrieval followed the standard narrative review reporting protocol [7].

Data items: The selection process involved choosing articles that meet the criteria and reviewing their data to guarantee consistent quality. Relevant factors derived from the articles encompass the publication title, research site, sample size, study method, publication year, inclusion and exclusion criteria and study tool. Articles with incomplete data were excluded.

Framework: The evaluation covered the results of all investigations carried out on the services of community pharmacies and their readiness to participate inprimary healthcare activi-

ties in Nigeria and spanned from the years 1980 to 2022.

Articles search process: To conduct the study, a search was performed using relevant keywords related to the study's title. PubMed and Google Scholar were utilized to find articles and studies on the role of community pharmacies in primary healthcare in Nigeria published between 1980 and 2022. The search employed both free-text search terms and Medical Subject Headings (MeSH), including "Primary","Health","Care," "Community", "Pharmacies," "Services," "Implementation," "Extent of preparedness," "PHC policy," "policy" and "Nigeria." Supplementary words that were deemed pertinent to the study's goal and title were also incorporated. These items were combined in series and parallel using AND and OR. However, this study is not a systematic review that requires more methodological search rigours. A total of 1929 articles were obtained for this review, out of which 1056 were retrieved from Google Scholar and the rest, 873, from PubMed. The eligibility of these articles was determined by evaluating them based on the inclusion criteria. The search process is depicted graphically in Figure 1 below.

Ethical approval: There is no requirement for ethical approval for this secondary study. Nonetheless, the review process only considered studies that had been approved ethically.

Study period and duration: This research spanned the period from February to March 2023 and encompassed academic papers that had undergone peer-review and were released between January 1980 and December 2022.

Data analysis: The studies that were included underwent descriptive analysis on percentage, proportion, and frequency distribution with Miscosoft Excel.

Study articles selection process: A grand total of 1929 articles were gathered for this review – 873 were taken from PubMed and 1056 from Google Scholar. These articles were carefully examined to see if they met the criteria for inclusion. Unfortunately, 575 articles had to be removed because they were duplicates, and another 1281 were deemed irrelevant to the review's scope. This left us with only 73 articles to consider. However, upon closer consideration, 39 of these articles were disqualified due to invalid study design AND/OR missing follow-up data. Overall, only 34 articles were considered suitable for the review.

Data extraction instrument, pilot testing, and data extraction process: Data were extracted by two independent reviewers to improve reliability of the data extraction process. The methodology for extracting data in this study was based on a prior study done in Nigeria by Ogbonna et al [14]. Relevant and complete articles were selected for extraction, while irrelevant or incomplete ones were eliminated. The data that remained after this process were carefully analyzed and pilot tested. The pilot test included five articles that were not included in the main study. To further enhance the instrument's effectiveness, modifications were made such as logically arranging the data and designing the sheet in an appropriate table format. The final instrument was reviewed and approved by an independent assessor who tested it on two other studies before its use for the actual data collection.

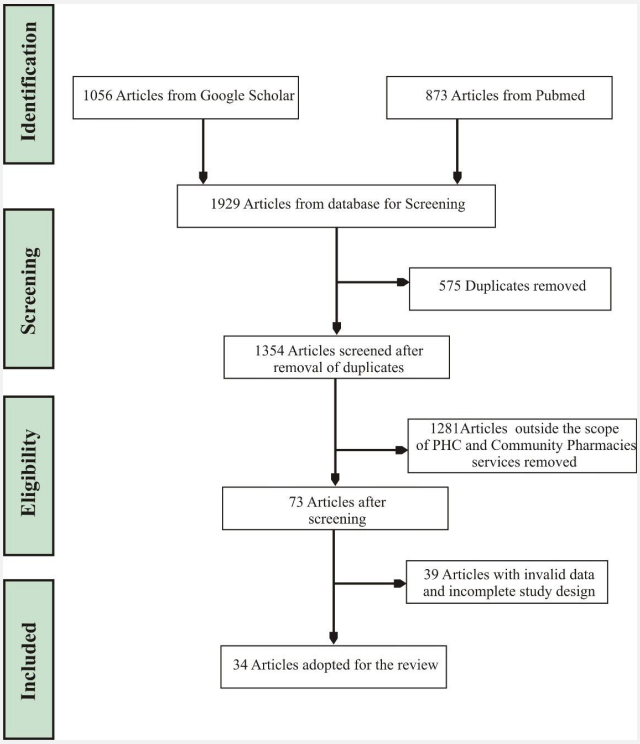

Figure 1: Flow chart of search process.

Table 1: The evidence of research articles adopted for the review.

Ref.	Title	Location	Design	Year of Publication	Sample Size	Inclusion	Exclusion	Study Instrument
[8]	Evaluation of the Participation of Community Pharmacists in Primary Healthcare Services in Nigeria: A Mixed-Method Survey	South- West	Mixed-Method	2022	963	Retail pharmacies whose first date of registration as community pharmacists was 2018 or earlier. Community pharmacist respondents with a corresponding set of two client respondents available	Pharmaceutical wholesalers. Community pharmacists with less than one full year of practice experience Pharmacists in other practice settings and other geopolitical zones (outside the Southwest)	Questionnaire
[9]	Evaluation of Community Pharmacists' Involvement in Primary Health Care	South-South		2002	199	Registered community pharmacists practicing in Benin City	Other health professionals (nurses, doctors etc.) other than community pharmacists	Questionnaire
[10]	Health promotion perceptions among community pharmacists in Nigeria	South-South	Cross-sectional descriptive study	2005	225	Registered community pharmacies operating in Warri and Benin City	Other pharmaceutical outlets and community pharmacies practicing outside Warri and Benin City	Questionnaire

[11]	Pharmacists' Distribution in Nigeria; implication in the provision of safe medicines and pharmaceutical care	Nation wide	Survey	2017	36,836	Community pharmacists, hospital pharmacists, and regulators, pharmacists in administration, academics, and industry	Pharmacists from all practice areas operating outside the six-geopolitical zones of Nigeria	Interviews
[12]	The participation of community pharmacists in the case management of malaria in Enugu metropolis, Nigeria: a cross-sectional survey	South-East	Cross-sectional	2020	103	Registered Pharmacists, Participants with informed consent excluded from the study.	Intern pharmacists, pharmacy trainees, and pharmacy technicians	Questionnaire
[13]	Barriers to Implementation of Pharmaceutical Care by Pharmacists in Nsukka and Enugu Metropolis of Enugu State	South-East	Cross-sectional	2012	80	Registered Pharmacists, Attendants hospital pharmacies	All pharmacies outside Enugu City and Nsukka axis	Semi-structured interviews
[14]	Pharmaceutical care and community pharmacy practice in Nigeria; grappling with the frontier	Nation wide	Survey	2015	120	All registered community pharmacists in Nigeria	Unregistered community pharmacists in Nigeria	Interviews
[15]	Assessment of attitudes of University of Nigeria pharmacy students towards pharmaceutical care	South-East	Survey	2009	800	All pharmacy undergraduate students that were present in the class at the time the questionnaires were distributed	Those that were not in class, postgraduate students in the same department and other students not in department of pharmacy	Questionnaire
[16]	Limitations to the dynamics of pharmaceutical care practice among community pharmacists in Enugu urban, south-east Nigeria	South-East	Cross-sectional-descriptive study	2015	78	Community pharmacists residing and practicing within Enugu metropolis, community pharmacists registered with the PCN, those who have practiced for at least more than 1 year in community pharmacy and those who gave their informed consent to participate in the study	community pharmacists who did not give their informed consent to participate in the study, those who are not duly registered with PCN, those who have not practiced for up to 1 year, community pharmacists practicing outside Enugu metropolis	Questionnaire
[17]	Attitude of Nigerian pharmacists towards pharmaceutical care	Nation-wide	Descriptive Statistics	2005	1500	Registered pharmacists who attended regional meetings as at the time when questionnaire was distributed	Those absent from the regional meetings of their locations	Questionnaire
[18]	Public perceptions of community pharmacists in Benin City, Nigeria	South-South	Cross-sectional	2001	1500	Random sample of willing public participants from Oredo, Egor and IkpobaOkha Local Government Areas of Edo State	People not willingly to participate in the study, respondents outside the three local government area under study	Questionnaire
[19]	Pharmaceutical care activities of community pharmacists in relation to hypertensive patients	South-West	Survey	2002	80	Registered community pharmacists in Ondo State who have at least two years professional experience	Unregistered community pharmacists, those with less than two years practice experience	Questionnaire
[20]	Knowledge, Attitude and Practice of Pharmaceutical Care among Pharmacists in a State in Nigeria	South-South	Prospective Study	2018	120	All pharmacists that came from all over Delta State to attend a scheduled meeting of the Pharmaceutical Society of Nigeria in Abraka on August 2012	All pharmacists who were not in attendance during the meeting in Abraka in August 2012	Questionnaire
[21]	Pharmaceutical Care Implementation: A Survey of Attitude, Perception and Practice of Pharmacists in Ogun State, South-Western Nigeria	South-West	Pre-tested and descriptive statistics	2011	120	pharmacists (including interns) working in the Ogun State University, the three tertiary health institutions, five secondary health care institutions.	Pharmacists outside Ogun State, those in Ogun State who did not release consent	Validated structured questionnaire
[22]	Outcomes of pharmaceutical care intervention to hypertensive patients in a Nigerian community pharmacy	South- South	Non-randomised, single-site and uncontrolled	2006	42	Hypertensive patients aged 18 yearsand above, currently taking an antihypertensive medication, blood pressure of 140/90 mmHg and above, and consent to participate in the study.	Patients who are not hypertensive and less than 18 years of age. Those who did not give their consent	Interviews
[23]	Integrating community pharmacy into community based anti-retroviral therapy program: A pilot implementation in Abuja, Nigeria	North- Central	Descriptive Statistics	2018	80	Patient stability, defined by duration of facility-based ART of ≥ 6months with successful suppression of viral load below detection level (20 copies/ml); only patients on first line ART regimens; Those willingness to participate	Patients previously lost to follow up or had unstructured treatment interruptions, pediatric and patients with co-morbidities issue.	Evaluation form

[24]	The organisation of primary health care service delivery for non-communicable diseases in Nigeria: A case-study analysis	North/South	Mixed method	2022	107	Key PHC staff (nurses, community health workers or doctors)	All casual staffs and those who did not grant consent	Interviews
[25]	Evaluating the Involvement of Community Pharmacists in Health Promotion Practices after Educational Intervention in Oyo State, Nigeria	South-West	cross-sectional and post training evaluation	2013	91	community pharmacists working in registered premises as at December 31, 2014 (PCN, 2014).	Those who are not registered	Questionnaire
[26]	Evaluating Pharmacist Level of Involvement in disease Prevention Activities in Nigeria	Nation wide	Cross-sectional survey	2017	500	Registered community pharmacists who are willingly	Other health professionals	Questionnaire
[27]	Improving maternal and child health: a situational analysis of primary health care centres of Sokoto state, Nigeria	North-West	Descriptive cross-sectional	2018	88	Only health facilities of the status of PHCs as defined by State Government	PHCs where the head/in-charge or representative was not available to provide the required information including documented evidences at the time of assessment	Interview
[28]	The Roles of Pharmacists in Optimizing Care for Hypertensive Patients in Hospital and Community Pharmacies in Edo State, South-South Nigeria	South- South	Descriptive cross-sectional, non-randomised study	2020	155	Practicing registered Pharmacist	Not registered and practicing Pharmacist	Questionnaire
[29]	Qualitative Analysis of One Primary Health Care per Ward in Ekiti State, Nigeria	South-West	cross-sectional	2021	25	Staff of PHC centres and patients who visited the PHC facilities	Those who did not grant consent and people who are not staff of studied PHC centres	Interviews
[30]	Evaluation of prescription pattern and patients' opinion on healthcare practices in selected primary healthcare facilities in Ibadan, South-Western Nigeria	South-West	Prospective cross-sectional study	2015	5280	All consenting patients who are above the age of 18 years	Pregnant women, as well as non-consented patients and healthcare workers	Interview/ Questionnaire
[31]	Primary health care workers' knowledge and attitudes towards depression and its management in the MeHPric-P project, Lagos, Nigeria	South-West	Cross-sectional	2017	625	Primary health care workers such as pharmacists, doctors and nurses who consented	Non-professional PHC workers and those who did not consent	Questionnaire
[32]	Pharmacist prescribing: a cross-sectional survey of the views of pharmacists in Nigeria	Nation wide	online cross-sectional survey	2018	775	Pharmacists from the Facebook group of Pharmaceutical Society of Nigeria	Those not in the online platform	Questionnaire
[33]	Medication Counselling Practice in Community Pharmacies in Lagos State, Nigeria	South-West	Cross-sectional, descriptive and survey	2014	185	Outlets identified as community pharmacies by the Pharmacists‟ Council of Nigeria (PCN) .	Outlets solely designated as wholesale pharmacy or not registered by PCN	Questionnaire
[34]	Injection safety practices among primary health care workers in Ilorin, Kwara State of Nigeria	North-Central	Descriptive cross-sectional study	2012	336	Primary Health Care Workers (PHCWs) from both the Public and private centres. Those that gave their consent	Those who did not release their consent	Questionnaire
[35]	Community Pharmacists' Services during the COVID-19 Pandemic: A Case Study of Lagos State, Nigeria	South-West	Cross-sectional	2022	298	Community pharmacists duly registered with the Pharmacists' Council of Nigeria and practicing in Lagos State.	Pharmacists in other pharmacy practice areas	Questionnaire
[36]	Assessment of disposal practices of expired and unused medications among community pharmacies in Anambra State southeast Nigeria: a mixed study design	South-East	Mixed Method	2019	103	Pharmacists and key informants who gave their informed consent	Pharmacists and key informants who did not give their informed consent	Questionnaire and Key Informant Interview

[37]	The impact of rapid malaria diagnostic tests upon anti-malarial sales in community pharmacies in Gwagwalada, Nigeria	North- Central	Cross-sectional	2012	1226	Participants that had symptoms of uncomplicated malaria and were at least ten years of age or older.	Participants that had no symptoms of severe Malaria. Pregnant women	Questionnaire
[38]	The organisation of primary health care service delivery for non-communicable diseases in Nigeria: A case-study analysis	Nation wide	Mixed method	2022	107	Key PHC staff (nurses, community health workers or doctors) and randomly selected health workers who have worked for a minimum of three months at the facility.	PHC staff who did not give their consent and non-PHC staff who did not fall into the random selection as well as those who did not give their consent	Questionnaire Interviews
[39]	The participation of community pharmacists in the case management of malaria in Enugu metropolis, Nigeria: a cross-sectional survey	South-East	cross-sectional survey	2020	103	Pharmacists who are registered with the Pharmacists Council of Nigeria, those who gave informed consent to participate in the study.	Intern pharmacists, pharmacy trainees, and pharmacy technicians	Questionnaire
[40]	Pathways to high and low performance: factors differentiating primary care facilities under performance-based financing in Nigeria	Nation wide	Multiple case study	2018	258	Major Staff of PHCCs (Pharmacists, nurses, doctors. Those that gave informed consent	Non-professional staff of PHCCs and professionals who did not grant consent	Semi-structured interview, observation and documentary
[41]	Determinants of primary healthcare services utilisation in an under-resourced rural community in Enugu State, Nigeria: a cross-sectional study	South-East	cross-sectional	2022	335	Adult residents aged 18 years and above in Obukpa community, Nsukka local government area of Enugu State	Those younger than 18 years of age and respondents from other local government area of Enugu	Questionnaire

Table 2: Focus on studies on community pharmacies extent of services towards PHC implementation in Nigeria according to geo-political zone distribution.

S/N	Geopolitical zones	No. of Studies, n (%)	Study focus
1.	South West	8(23.53)	Extent/quality of service, limiting factors, perception and level of preparedness and involvement
2.	South South	6(17.65)	Involvement level, extent of participation, quality service, impact of implementation
3.	Nationwide	7(20.59)	Implementation level, extent of care, barriers in services, extent of service delivery
4.	South East	9(26.47)	Preparation level and of participation, encouraging factors and barrier, attitude, participation .
5.	North Central	3(8.82)	Extent of service delivery, preparedness
6.	North West	1(2.94)	Preparedness level, capacity
7.	**Total**	**34(100)**	

Table 3: Evaluation of studies on community pharmacies, extent and preparedness of PHC implementation in Nigeria based on Oxford Center for Evidence-Based Medicine's (OCEM) Levels of Evidence from Highest to Lowest [42].

S/N	Level of Evidence	Definition	n (%)
1.	1A	Systematic Review of RCTs	0(0.0)
2.	1B	Individual RCTs	0(0.0)
3.	2A	Systematic review of cohort studies	0(0.0)
4.	2B	Individual cohort studies, Low quality RCT	0(0.0)
5.	2C	Ecological studies	0(0.0)
6.	3A	Systematic review of case-control studies	0(0.0)
7.	3B	Individual case control studies	5(14.70)
8.	4	Case series, poor quality cohort and case control studies	29(85.30)
Total			**34 (100)**

Table 4: Assessment of Studies on community pharmacies, extent and preparedness of PHC implementation in Nigeria based on the Scottish Intercollegiate Guidelines Network for hierarchy of Study Type [43].

S/N	Types of study according to hierarchy	n (%)
1.	Systematic review and Meta-analysis	0(0.00)
2.	Randomized Controlled Trials	2(5.88)
3.	Nonrandomized intervention studies	2(5.88)
4.	Observational studies	30(88.24)
5.	Non-experimental studies	0(0.00)
6.	Expert opinion	0(0.00)
	Total	**34(100)**

Table 5: Periodic distribution of community pharmacies, extent and preparedness of PHC implementation Studies in Nigeria.

S/N	Period of Publication of Study	No. of Studies, n (%)
1.	≤2000	0(0.00)
2.	2001–2010	7(20.59)
3.	2011–2022	27(79.41)
	Total	**34(100)**

Discussion

An overview of community pharmacies, extent and preparedness of PHC implementation in Nigeria: In Nigeria, the implementation of Primary Health Care [PHC] policy has been a major challenge for the government. Despite several efforts to improve access to basic healthcare services for all citizens, there are still significant gaps in the delivery of PHC services across the country. According to recent statistics, only about 20% of Nigerians have access to basic healthcare services, with rural areas being particularly underserved. Insufficient man power, funding and infrastructure for primary healthcare centers in Nigeria has emerged as a significant factor responsible for the present scenario. The majority of these centers have been deprived of fundamental amenities like electricity, water supply, and medical equipment, resulting in citizens resorting to seeking alternative healthcare options from traditional healers or self-medication. The ramifications of this trend are severe, with numerous preventable deaths caused due to inadequate or delayed treatment [14]. Community pharmacies play a crucial role in the implementation of Primary Health Care (PHC) policy in Nigeria. They are often the first point of contact for patients seeking healthcare services, especially in rural areas where access to healthcare facilities is limited. Community pharmacists are trained to provide basic health services such as screening for common diseases, dispensing medications, and providing health education to patients [25]. Furthermore, community pharmacies act as a crucial bridge connecting patients to other healthcare providers, including doctors and nurses. They possess the capability to direct patients to suitable healthcare facilities or specialists as and when required. Community pharmacists possess an extensive comprehension of the local community and can offer valuable inputs on the healthcare requirements of their patients. Furthermore, community pharmacies can help improve medication adherence among patients by providing counseling on medication use and monitoring drug therapy outcomes. This is particularly important in chronic disease management where non-adherence to medication regimens can lead to poor health outcomes. A study conducted by Oreagbaet al., revealed that community pharmacies in Nigeria are not adequately prepared to provide PHC services due to inadequate training and lack of necessary infrastructure [44]. Despite these challenges, some community pharmacies have taken steps towards improving their readiness for PHC policy implementation. For instance, some have invested in basic equipment such as blood pressure monitors and glucometers while others have undergone training on basic health screening procedures. Additionally, some community pharmacies have established partnerships with healthcare providers to ensure seamless referral and follow-up care for patients. Table 2 reveals that the South-east region of Nigeria has the highest number of studies on community pharmacies and their readiness to implement primary health care policies, accounting for approximately 27% of the total studies conducted. South-west, Nationwide, South-south, and North-central regions followed with 24%, 21%, 18%, and 9% of the studies respectively. North-west had a meager 2% of the total studies conducted in Nigeria. Most of the studies provide a general overview of the extent and involvement of community pharmacies in relation to PHC implementation in Nigeria. However, a similar study of greater sample size may be required to make a more rational and generalizeable inference.

Limitations: Limitations in search terms may have led to the possible exclusion of some potentially relevant studies. Additionally, certain studies that were included may have had some level of bias which was not identified which may have potentially impact the overall findings of the study. The chosen presentation format for tables and data was intentionally kept simple and clear, although alternative presentation styles may have been more effective. Some of the studies have low statistical quality for external validity and generalization.

Conclusion

This study delves into the depth of the degree of services and level of readiness of community pharmacies in Nigeria with regards to the implementation of primary healthcare (PHC). It references several articles that investigate the various aspects of community pharmacies, such as their quality of service, extent of care/service delivery, preparation and participation level, impact of PHC implementation, barriers and limiting factors etc. Through a comprehensive analysis of these articles, this study aims to shed light on the challenges and opportunities that community pharmacies in Nigeria face in delivering quality PHC services to the Nigerian population. An extensive series of studies were conducted across numerous regions in Nigeria, exploring various topics of interest. Interestingly, a greater number of research projects were carried out in the Southeastern region in comparison to other geopolitical regions, indicating a greater focus on this area. This may be due to the unique nature of the Southeastern region and the specific challenges faced by its inhabitants, or it could be due to the presence of research institutions or other factors that encourage research in this area.

Conflicts of interest: The authors have none to declare.

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References

1. Melton BL, Lai Z. Review of community pharmacy services: what is being performed, and where are the opportunities for improvement? Integr. Pharm Res Pract. 2017; 6(6): 79-89.

2. FIP. Vision of a Community-based Pharmacist: Community Pharmacy Section. International Pharmaceutical Federation. 2015.

3. Fatai A. Small and medium scale enterprises in Nigeria: the problems and prospects. The Collegiate Journal of Economics. 2011; 1: 5(6):1-22.

4. Adeloye D, David RA. &Olaogun AA. Health workforce and governance: the crisis in Nigeria. Hum Resour Health. 2017; 15(1): 32.

5. Ekpenyong A, Udoh A, Kpokiri E. & Bates I. An analysis of pharmacy workforce capacity in Nigeria. J Pharm Policy Pract. 2018; 11: 20.

6. Eniojukan, JF. & Adeniyi A. Community Pharmacists and primary healthcare programme. Nig J Pharm. 1997; 28(2): 21-24.

7. Ali H, Dehkordi EM, Hanan AI. & Sahar D. How to Write a Systematic Review: A Narrative Review.International Journal of Preventive Medicine. 2021; 12: 27.

8. Maduabuchi R, Ihekoronye ID. &Kanayo PO. Evaluation of the Participation of Community Pharmacists in Primary Healthcare Services in Nigeria: A Mixed-Method Survey.Intn. J Hlt. Pol Mgt. 2022; 11(6): 829-839.

9. Azuka, C. O. &Evbade, M A. Evaluation of Community Pharmacists' Involvement in Primary Health Care. Tropical Journal of Pharmaceutical Research. 2002; 1(2): 67-74.

10. Azuka CO. &Obehi OO. Health promotion perceptions among community pharmacists in Nigeria. International Journal of Pharmacy Practice; IJPP. 2005; 13: 213-221.

11. Oseni YO. &Yejide OO. Pharmacists' Distribution in Nigeria; implication in the provision of safe medicines and pharmaceutical care. International Journal of Pharmacy and Pharmaceutical Sciences. 2017; 9(10): 49-54.

12. Anosik C, Cordelia NC, Nneka UI, Maxwell OA. &Ukwe CV. The participation of community pharmacists in the case management of malaria in Enugu metropolis, Nigeria: a cross-sectional survey. Malaria case management for pharmacists. Malawi Medical Journal. 2020; 32(4); 218-225.

13. Okonta, J. M, Okonta, E. O. &Ofoegbu, T. C.Barriers to implementation ofpharmaceutical care by pharmacists in Nsukka and Enugu metropolis ofEnugu State. J Basic Clin Pharm. 2012; 3(2): 295-98.

14. Ogbonna BO, Ejim CE, Ikebudu CC, Uzodinma SU. & Orji CE. Pharmaceutical care and community pharmacy practice in Nigeria; grappling with the frontier. Eur J Pharm Med Res. 2015; 2(7): 33-42.

15. Udeogaranya PO, Ukwe CV. &Ekwunife OI. Assessment of attitudes of University of Nigeria pharmacy students towards pharmaceutical care. 2009. www.pharmacytimes.com/org (Accessed 10th April 2023).

16. Ogbonna BO, Ezenduka CC. &Oparah AC. Limitations to the dynamics of pharmaceutical care practice among community pharmacists in Enugu urban, southeast Nigeria. Integrated Pharmacy Research and Practice. (Dove press). 2015; 4: 1-7.

17. Oparah SCA. &Eferakeya AE. Attitude of Nigerian pharmacists towards pharmaceutical care. Pharm World Sci.; 2005; 27(3): 208-14.

18. Oparah CA, &Iwuagwu MA. Public perceptions of community pharmacists in Benin City, Nigeria. Int J Pharm Pract. 2001; 9: 191-5.

19. Oparah CA, Arigbe-Osula, ME. & Chi-Ukpai C. Pharmaceutical care activities of community pharmacists in relation to hypertensive patients. Nig. J Pharm. 2002; 33: 33-40.

20. Amibor KC, Onyegasi CS, &Ezeudu PI. Knowledge, Attitude and Practice of Pharmaceutical Care among Pharmacists in a State in Nigeria. African Journal of Pharmaceutical Research & Development 2018; 10 (1): 022-031.

21. Ismail AS, &Oluwatoyin O. Pharmaceutical Care Implementation: A Survey of Attitude, Perception and Practice of Pharmacists in Ogun State, South-Western Nigeria. International Journal of Health Research. 2011; 4(2): 91-97.

22. Azuka CO, David UA. &Ehijie FO Outcomes of pharmaceutical care intervention to hypertensive patients in a Nigerian community pharmacy. IJPP2006. 14: 115-122.

23. Yohanna KA, Gambo GA, Bolajoko J, Ritmwa G, Nanfwang D, Gbenga AK, Victor A. & Patrick, DIntegrating community pharmacy into community based anti-retroviral therapy program: A pilot implementation in Abuja, Nigeria, PLOS ONE. 2018; 13(1): 0190286. https://doi.org/10.1371/journal.pone.0190286.

24. Ajisegiri wS, Abimbola S, Tesema AG, Odusanya OO. & Peiris D. The organisation of primary health care service delivery for non-communicable diseases in Nigeria: A case-study analysis. PLOS Global Public Health. 2022; 2(7): e0000566. https://doi.org/10.1371/journal.pgph.0000566.

25. Yejide OO, Margaret &Olubunmi A. Evaluating the Involvement of Community Pharmacists in Health Promotion Practices after Educational Intervention in Oyo State, Nigeria. Texila International Journal of Public Health. 2013; 2520-3134.

26. David UA. &Azuka CO. Evaluating Pharmacist Level of Involvement in disease Prevention Activities in Nigeria. UK Journal of Pharmaceutical and Biosciences 2017; 5(4): 55-61.

27. Aminu UK, Sani L, Aminu GM. & Jessica TA. Improving maternal and child health: a situational analysis of primary health care centres of Sokoto state, Nigeria.Int J Community Med Public Health. 2018; 5(12): 5052-5062.

28. Achi CJ. & Ogbonna BO. Physician – Pharmacist Collaboration in Healthcare Services in Nigeria From 1980-2020: A Narrative Review Study. JCBR. 2020; (3): 80-81.

29. Michael TO.1&Alonge SK. Qualitative Analysis of One Primary Health Care per Ward in Ekiti State, Nigeria. Afr. J. Biomed. Res. 2021; (24): 291-297.

30. Adisa R, Fakeye TO. &Aindero VO. Evaluation of prescription pattern and patients' opinion on healthcare practices in selected primary healthcare facilities in Ibadan, south-western Nigeria. Afri Health Sci. 2015; 15(4): 1318-29. http://dx.doi.org/10.4314/ahs.v15i4.35.

31. Abiodun OA, Tomilola A, Bolanle OO, Abiodun O, Adedolapo F, Olajide I. Primary health care workers' knowledge and attitudes towards depression and its management in the MeHPric-P project, Lagos, Nigeria. 2017.

32. Asa A, Barry S, Julia M. &Shalkur D. Pharmacist prescribing: a cross-sectional survey of the views of pharmacists in Nigeria, International Journal of Pharmacy Practice, 2018; 2(26):111-119.

33. Ajiboye WT. Medication Counselling Practice in Community Pharmacies in Lagos State, Nigeria. University of Lagos (Nigeria) ProQuest Dissertations Publishing. 2014; 29217073.

34. Oladimeji AB, Adekunle GS, Sunday AA, Omotoso IM, Tanimola M. A.&James OB. Injection safety practices among primary health care workers in Ilorin,Kwara State of Nigeria. Quarterly scientific, online publication by Department of Nursing A',Technological Educational Institute of Athens. 2012; (6): 3.

35. Ogochukwu UA, Alexander AA, Ayobami AA, Folasade OL, Oghogho RI. & Ugochukwu AM. Community Pharmacists' Services

during the COVID-19 Pandemic: A Case Study of Lagos State, Nigeria. Journal of Research in Pharmacy Practice 2022; Wolters Kluwer – Medknow. [Downloaded free from http://www.jrpp.net on Wednesday, April 12, 2023, IP: 197.210.54.249.

36. Michael I, Ogbonna B, Sunday N, Anetoh M. & Matthew O. Assessment of disposal practices of expired and unused medications among community pharmacies in Anambra State southeast Nigeria: a mixed study design. J Pharm Policy Pract. 2019; 12: 12; 1-10. doi: 10.1186/s40545-019-0174-1. PMID: 31016021; PMCID: PMC6469121.

37. John OI, Brian EF, Gafar A. & David GL. The impact of rapid malaria diagnostic tests upon anti-malarial sales in community pharmacies in Gwagwalada, Nigeria. Malaria Journal. 2013; 12: 380.

38. Ajisegiri WS, Abimbola S, Tesema AG, Odusanya OO, Peiris D. & Joshi R. The organisation of primary health care service delivery for non-communicable diseases in Nigeria: A case-study analysis. PLOS Glob Public Health. 2022; (7): 0000566. doi: 10.1371/journal.pgph.0000566. PMID: 36962373; PMCID: PMC10021956.

39. Anosike C, Chu-Madu CN, Igboeli NU, Adibe MO. &Ukwe CV. The participation of community pharmacists in the case management of malaria in Enugu metropolis, Nigeria: a cross-sectional survey. Malawi Med J. 2020; 32(4): 218-225. doi: 10.4314/mmj.v32i4.7. PMID: 34457207; PMCID: PMC8364789.

40. Mabuchi S, Sesan T.&Bennett SC. Pathways to high and low performance: factors differentiating primary care facilities under performance-based financing in Nigeria. Health Policy Plan. 2018; 33(1):41-58. doi: 10.1093/heapol/czx146. PMID: 29077844; PMCID: PMC5886213.

41. Nwokoro UU, Ugwa OM, Ekenna AC, Obi IF, Onwuliri CD. &Agunwa C. Determinants of primary healthcare services utilisation in an under-resourced rural community in Enugu State, Nigeria: a cross-sectional study. Pan Afr Med J. 2022; 15; 42: 209. doi: 10.11604/pamj; 42.209.33317. PMID: 36258898; PMCID: PMC9548321.

42. Jeremy H, Iain C, Paul G, Trish G, Carl H, Alessandro L, Ivan M, Bob P, & Hazel T. Explanation of the Oxford Centre for Evidence-Based Medicine (OCEBM) Levels of Evidence (Background Document). Oxford Centre for Evidence-Based Medicine.2001; Accessed athttps://www.cebm.ox.ac.uk/resources/levels-of-evidence/ocebm-levels-of-evidence. Accessed on 2 March. 2023.

43. Harbour R, Miller JA new system for grading recommendations in evidence-based guidelines. BMJ.2001; 11: 323(7308): 334-6. doi: 10.1136/bmj.323.7308.334. PMID: 11498496; PMCID: PMC1120936.

44. Oreagba I, Ogunleye O. &Olayemi S. The knowledge, perceptions and practice of Pharmacovigilance amongst community pharmacists in Lagos state, south west Nigeria. Pharmacoepidemiology and drug safety. 2011; 20: 30-5. 10.1002/pds.2021.