

Assessment of Pharmaceutical Care versus Traditional Pharmacy Practice in Ogun State Nigeria: Tracking System Dynamics

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Abstract

Background: Pharmaceutical care is the responsible provision of pharmacotherapy to achieve definite outcomes and improve patients' quality of life. It is a departure from the traditional pharmacy practice to patients' oriented care. This study assessed the provision of traditional pharmacy services versus pharmaceutical care among pharmacists.

Methods: The study was a questionnaire based cross-sectional descriptive survey.

Results: The mean \pm Standard deviation for provision of pharmaceutical care was 3.27 ± 0.83 and a response rate was 62.8%. Only 12.0 (24.5%) of the pharmacists understood the true concept of pharmaceutical care while the rest had varying levels of partial understanding of the concept. Most of the pharmacists years of qualification fell between 1 - 5 years 61.0 (55.5%). Majority of them were males 62.0 (56.4%).

Conclusion: Majority of the pharmacists in the state engaged predominantly on the traditional pharmacy practice. Most of the respondents do not document their activities, an indication of non-practice of pharmaceutical care. The practice of pharmaceutical care based on key indicators used in the study is still largely undeveloped.

Keywords: *Pharmaceutical Care; Pharmacy Practice; Patients; Pharmacists; Patient Care; Nigeria; Pharmacy Services*

Key Messages:

- Pharmaceutical care practice is still largely undeveloped.
- The pharmacists still engage in traditional practice while leaving out some of the core aspects of pharmaceutical care.

Introduction

Pharmaceutical care (PC) mandates that practitioners not only dispense medications but assume responsibility for improving the quality of patients' outcomes [1]. For pharmaceutical care to achieve its goals, it needs the traditional pharmacy to evolve and transform. In traditional pharmacy practice, pharmacists focus on dispensing of medicines without medication therapy management nor take responsibility for pharmacotherapy [2,3]. PC is the responsible provision of medicine therapy for the purpose of achieving a definite outcome that improves a patient's quality of life" [4,5]. The practitioner takes responsibility for patient drug therapy needs and

are accountable for this commitment” [6,7]. It reduces the cost of medications and the incidence of adverse events while promoting effectiveness [8-14]. This study assessed the provision of traditional pharmacy services versus pharmaceutical care services among pharmacists.

Methods

Study design

This study was a cross-sectional descriptive survey using self-administered structured and validated questionnaire. All the eligible community pharmacists who were dully registered for practice in the state were recruited for the study.

Study location

The study was carried out in Ogun State, Nigeria. Ogun state is one of the 36 states of the Federal Republic of Nigeria in South West Africa. It has borders with Lagos State on the South, Oyo and Osun States on the North, Ondo State to the east and the Republic of Benin on the west. Abeokuta is the state capital and the largest city in the state. It is situated between latitudes 6.2°N and 7.8° and longitudes 3.0°E and 5.0° east. The land area is 16,409.26 square kilometres and has a human population of 3,728,098 comprising of 1,847,243 males and 1,880,855 females. The State has 20 Local Government Areas. Ogun State has a Federal Medical Centre located in Abeokuta within the framework of the laws establishing the centres is to provide qualitative, affordable, specialized/tertiary level hospital care to the citizenry and to ultimately reduce the burden of diseases within the communities, through provision of prompt and emphatic preventive, curative and rehabilitative services.

Study population

The study was designed to capture all registered Pharmacists in Ogun State.-

Inclusion criteria

Registered Pharmacists working in Ogun State including those working in the community premises, hospitals, academic, government establishments that were willing to participate in the study.

Exclusion criteria

Registered pharmacists who were not willing to participate in the study.

Sample size

The 175 registered pharmacists who gave their informed consent to participate in the study were used.

Instrument/questionnaire

The study was a questionnaire based survey.

Questionnaire development

A structured questionnaire was adopted from previous studies of Development and Reliability assessment of Trilogy Scale with practicality; competence and importance of patient oriented services with minor changes based on literature. The structured questionnaire was employed to obtain the required information [15]. The questionnaire was prefaced with an introduction of the survey and a reassurance of confidentiality. It was made up of two parts. Part A was designed to gather socio-demographic data of the respondents which include age, gender, nationality, country where qualification was obtained, post qualification experience, place of work, highest degree obtained, status (Owner or Employee). Part B of the questionnaire started with a question on the definition of Pharmaceutical Care. It further

included a set of statements in which the pharmacists were asked to indicate their level of agreement using a Likert scale of 0-4 response scale. This was used to determine the ‘frequency of Practice’ where the scale measures from Never to Very often, ‘Importance’ where the scale measures from definitely unimportant-definitely important and ‘Preparedness’ to provide service where the scale measures from partially prepared-Extremely prepared. The respondents were to state their level of agreement to each of the statements presented.

Instrument validity and reliability

The questionnaire was previously pretested. Adjustments were made for some items that were not self-explanatory for easy understanding. Reliability was confirmed Cronbach alpha which was used to check for the internal consistency.

Method of data collection

The questionnaires were self-administered to the pharmacists and were collected immediately after completion.

Statistical analysis

The returned questionnaires were coded for easy of reference. The responses from the study were double fed into Microsoft Excel Spreadsheet for easy sorting and double checked to ensure accurate data entry. Data were categorised and summarised using descriptive statistics of frequency, mean, standard deviation and percentages.

Ethical issues

Ethical approval was obtained from the Research and Ethical Review Committee of Federal Medical Centre Abeokuta before commencement of the study. Verbal informed consent was obtained from each participant before commencement of study.

Results

Variables	n	(%)
Age		
Below 30 years	50	45.5
30 - 39 years	32	29.1
40 - 49 years	17	15.5
50 - 59 years	4	3.6
60 and Above	5	4.5
Gender		
Male	62	56.4
Female	46	41.8
Statuses		
Employee	91	82.7
Owner	12	10.9
Post-Qualification Experience		
1 - 5 years	61	55.5
6 - 10 years	24	21.8
11 - 15 years	9	8.2
Over 15 years	10	9.1

Table 1: Socio-demographic characteristics of respondents.

Statements	Never	Rarely	Sometimes	Often	Very Often
1) Process new and refill prescriptions and provide medication to the patient		8 (7.3)	13 (11.8)	15 (13.6)	57 (51.8)
2) Counsel patient/patient representative regarding proper use or prescribed medication		8 (7.3)	4 (3.6)	25 (22.7)	54 (49.1)
3) Counsel patient/patient representative regarding proper use of non-prescription medication		5 (4.5)	14 (12.7)	27 (24.5)	46 (41.8)
4) Counsel patient/patient representative regarding proper use of self-monitoring devices		4 (3.6)	14 (12.7)	32 (29.1)	42 (38.2)
5) Develop and manage medication distribution and control systems	1 (.9)	139 (11.8)	18 (16.4)	24 (21.8)	33 (30.0)
6) Manage the pharmacy (e.g. personnel, facilities, operations)	1 (.9)	5 (4.5)	15 (13.6)	17 (15.5)	53 (48.2)
7) Manage medication use systems (D.U.E,D.U.R)	3 (2.7)	8 (7.3)	14 (12.7)	33 (30.0)	30 (27.3)
8) Provide patients with general drug information, recommendations, and education.		8 (7.3)	6 (5.5)	22 (20.0)	57 (51.8)
9) Ask the patient to describe his or her medical condition, including medical problems and symptomatology		16 (14.5)	11 (10.0)	32 (29.1)	34 (30.9)
10) Ask the patient questions to find out if he/she might be experiencing DRPs	2 (1.8)	7 (6.4)	10 (9.1)	33 (30.0)	39 (35.5)
11) Ask the patient questions to find out about the perceived effectiveness of drug he /she was talking	1 (.9)	10 (9.1)	16 (14.5)	25 (22.7)	41 (37.7)
12) Check the patient's record for potential DRPs (Drug Related Problems)	5 (4.5)	15 (13.6)	19 (17.3)	26 (23.6)	19 (17.3)
13) When necessary, intervene with patients and other health care providers to efficiently and effectively communicate and resolve patient problems	3 (2.7)	9 (8.2)	13 (11.8)	25 (22.7)	40 (36.4)
14) Document information about the patient's medical conditions on written records or computerized notes	4 (3.6)	13 (11.8)	16 (14.5)	27 (24.5)	31 (28.2)
15) Document all medications currently being taken by the patient on written records or computerized notes	2 (1.8)	19 (17.3)	19 (17.3)	22 (20.0)	30 (27.3)
16) Document DRPs, potential or actual, in written records or computerized notes	3 (2.7)	18 (16.4)	27 (24.5)	13 (11.8)	29 (26.4)
17) Determine the appropriateness of care prescribed or recommended to the patient		14 (12.7)	20 (18.2)	24 (21.8)	34 (30.9)
18) Ask the patient what he/she wants to achieve from the drug therapy		19 (17.3)	19 (17.3)	37 (33.6)	16 (14.5)
19) When necessary, develop a strategy to resolve or prevent DRPs	1 (.90)	17 (15.5)	16 (14.5)	28 (25.5)	26 (23.6)
20) Document the desired therapeutic objectives for the patient	2 (1.8)	15 (13.6)	20 (18.2)	28 (25.5)	24 (21.8)
21) Establish follow-up plans to evaluate the patient's progress towards his/her drug therapy objectives	1 (.9)	12 (10.9)	17 (15.5)	26 (23.6)	35 (31.8)
22) Use interactive counselling using open-ended questions to optimize the patient's understanding and commitment to follow-through on medication use and planning	2 (1.8)	7 (6.4)	10 (9.1)	47 (42.7)	24 (21.8)
23) Verify that the patient understood the information presented		9 (8.2)	9 (8.2)	27 (24.5)	45 (40.9)

24) Follow up with patient to establish progress toward drug therapy objectives	1 (.9)	9 (8.2)	17 (15.5)	38 (34.5)	24 (21.8)
25) Ask patients questions to ascertain whether the therapeutic objective (s) was (were) being reached		14 (12.7)	14 (12.7)	27 (24.5)	35 (31.8)
26) Ask patients question to assess how they use their medications		12 (10.9)	4 (3.6)	34 (30.9)	38 (34.5)
27) Ask patients questions about how they are doing to get an overview of conditions and medications		6 (5.5)	8 (7.3)	32 (29.1)	41 (37.3)
28) Ask patients about information used to monitor disease and drug therapy (e.g., "What did the doctor tell you about eating potassium -rich foods?" "What are the results of home monitoring {e.g. glucose, blood pressure}?")		7 (6.4)	17 (15.5)	44 (40.0)	19 (17.3)
29) Document progress toward desired therapeutic objective (s) for each DRPs	5 (4.5)	16 (14.5)	17 (15.5)	31 (28.2)	17 (15.5)
30) Document any intervention made in the patient's file, prescription, report, or medical order	3 (2.7)	18 (16.4)	21 (19.1)	19 (17.3)	27 (24.5)
31) Document outcomes achieved as a result of the interventions made	6 (5.5)	18 (16.4)	20 (18.2)	25 (22.7)	18 (16.4)

Table 2: Frequency of practice of pharmacy services.

Pharmacy Services	n	Mean	Standard Deviation
1. Process new and refill prescriptions and provide medication to the patient	93	3.30	1.008
2. Counsel patient/patient representative regarding proper use of prescribed medication	91	3.37	0.927
3. Counsel patient/patient representative regarding proper use of non-prescription medication	92	3.24	0.906
4. Counsel patient/patient representative regarding proper use of self-monitoring devices	92	3.22	0.862
5. Develop and manage medication distribution and control systems	89	2.84	1.117
6. Manage the pharmacy(e.g. personnel, facilities, operations)	91	3.27	1.001
7. Manage medication use systems(D.U.E,D.U.R)	88	2.90	1.083
8. Provide patients with general drug information, recommendations, and education.	93	3.38	0.943
9. Ask the patient to describe his or her medical condition, including medical problems and symptomatology	93	2.90	1.084
10. Ask the patient questions to find out if he/she might be experiencing DRPs	91	3.10	1.023
11. Ask the patient questions to find out about the perceived effectiveness of drug he/she was taking	93	3.02	1.073
12. Check the patient's record for potential DRPs	84	2.46	1.197
13. When necessary, Intervene with patients and other health care providers to efficiently and effectively communicate and resolve patient problems	90	3.00	1.142
14. Document information about the patient's medical conditions on written records or computerized noted	91	2.75	1.198
15. Document all medications currently being taken by the patient on written records or computerized notes	92	2.64	1.201
16. Document DRPS, potential or actual, in written records or computerized notes	90	2.52	1.229
17. Determine the appropriateness of care prescribed or recommended to the patient	92	2.85	1.089

18. Ask the patient what he/she wants to achieve from the drug therapy.	91	2.55	1.014
19. When necessary, develop a strategy to resolve or prevent DRPs	88	2.69	1.128
20. Document the desired therapeutic objectives for the patient	89	2.64	1.121
21. Establish follow-up plans to evaluate the patient's progress towards his /her drug therapy objectives	91	2.90	1.096
22. Use interactive counselling using open-ended questions to optimize the patient's understanding and commitment to follow-through on medication use and planning	90	2.93	0.946
23. Verify that the patient understood the information presented	90	3.20	0.985
24. Follow up with patient to establish progress toward drug therapy objectives	89	2.84	0.976
25. Ask patients question to ascertain whether the therapeutic objective(s) was (were) being reached	90	2.92	1.083
26. Ask patients question to assess how they use their medications	88	3.11	1.011
27. Ask patients questions about how they are doing to get an overview of conditions and medications	87	3.24	0.889
28. Ask patients about information used to monitor disease and drug therapy (e.g., "What did the doctor tell you about eating potassium-rich foods?" "What are the results of home monitoring {e.g., glucose, blood pressure}?")	87	2.86	0.851
29. Document progress toward desired therapeutic objective(s) for each DRPS	86	2.45	1.175
30. Document any intervention made in the patient's file, prescription, report, or medical order	88	2.56	1.221
31. Document outcomes achieved as a result of the interventions made	87	2.36	1.220
Total		90.01	32.799

Table 3: Pharmacy practice services rendered by pharmacists.

Statements	Definitely Unimportant	Unimportant	Undecided	Important	Definitely Important
1) Process new and refill prescriptions and provide medication to the patient	1 (.9)		5 (4.5)	39 (35.5)	48 (43.6)
2) Counsel patient/patient representative regarding proper use or prescribed medication	1 (.9)	1 (.9)	1 (.9)	25 (22.7)	66 (60.0)
3) Counsel patient/patient representative regarding proper use of non-prescription medication	1 (.9)	2 (1.8)	6 (5.5)	48 (43.6)	38 (34.5)
4) Counsel patient/patient representative regarding proper use of self-monitoring devices	1 (.9)	3 (2.7)	9 (8.2)	41 (37.3)	41 (37.3)
5) Develop and manage medication distribution and control systems	1 (.9)	-	12 (10.9)	42 (38.2)	36 (32.7)
6) Manage the pharmacy (e.g. personnel, facilities, operations)	1 (.9)	1 (.9)	9 (8.2)	31 (28.2)	51 (46.4)
7) Manage medication use systems (D.U.E,D.U.R)	1 (.9)	3 (2.7)	11 (10.0)	38 (34.5)	40 (36.4)
8) Provide patients with general drug information, recommendations, and education.	1 (.9)		3 (2.7)	32 (29.1)	58 (52.7)
9) Ask the patient to describe his or her medical condition, including medical problems and symptomatology	1 (0.9)	2 (1.8)	11 (10.0)	35 (31.8)	46 (41.8)
10) Ask the patient questions to find out if he/she might be experiencing DRPs	1 (0.9)	6 (5.5)	5 (4.5)	30 (27.3)	53 (48.2)
11) Ask the patient questions to find out about the perceived effectiveness of drug he /she was talking	2 (1.8)	4 (3.6)	11 (10.0)	30 (27.3)	47 (42.7)

12) Check the patient's record for potential DRPs	4 (3.6)	2 (1.8)	7 (6.4)	43 (39.1)	35 (31.8)
13) When necessary, intervene with patients and other health care providers to efficiently and effectively communicate and resolve patient problems	1 (0.9)	4 (3.6)	6 (5.5)	36 (32.7)	49 (44.5)
14) Document information about the patient's medical conditions on written records or computerized notes	1 (0.9)	7 (6.4)	6 (5.5)	37 (33.0)	44 (40.0)
15) Document all medications currently being taken by the patient on written records or computerized notes	1 (0.9)	3 (2.7)	13 (11.8)	38 (34.5)	40 (36.4)
16) Document DRPs, potential or actual, in written records or computerized notes	1 (0.9)	5 (4.5)	11 (10.0)	40 (36.4)	36 (32.7)
17) Determine the appropriateness of care prescribed or recommended to the patient	1 (0.9)	2 (1.8)	8 (7.3)	48 (43.6)	36 (32.7)
18) Ask the patient what he/she wants to achieve from the drug therapy	1 (0.9)	2 (1.8)	21 (19.1)	44 (40.0)	28 (25.5)
19) When necessary, develop a strategy to resolve or prevent DRPs	1 (0.9)	3 (2.7)	5 (4.5)	37 (33.6)	46 (41.8)
20) Document the desired therapeutic objectives for the patient	1 (0.9)	5 (4.5)	12 (10.9)	43 (39.1)	32 (29.1)
21) Establish follow-up plans to evaluate the patient's progress towards his/her drug therapy objectives	1 (0.9)	5 (4.5)	11 (10.0)	36 (32.7)	40 (36.4)
22) Use interactive counselling using open-ended questions to optimize the patient's understanding and commitment to follow-through on medication use and planning	1 (0.9)	1 (0.9)	16 (14.5)	31 (28.2)	46 (41.8)
23) Verify that the patient understood the information presented	1 (0.9)	-	7 (6.4)	40 (36.4)	44 (40.0)
24) Follow up with patient to establish progress toward drug therapy objectives	1 (0.9)	1 (0.9)	14 (12.7)	40 (36.4)	36 (32.7)
25) Ask patients questions to ascertain whether the therapeutic objective (s) was (were) being reached	1 (0.9)	3 (2.7)	9 (8.2)	32 (29.1)	46 (41.8)
26) Ask patients question to assess how they use their medications	1 (0.9)	1 (0.9)	5 (4.5)	31 (28.2)	55 (50.0)
27) Ask patients questions about how they are doing to get an overview of conditions and medications	1 (0.9)	3 (2.7)	5 (4.5)	32 (29.1)	51 (46.4)
28) Ask patients about information used to monitor disease and drug therapy (e.g., "What did the doctor tell you about eating potassium -rich foods?" "What are the results of home monitoring {e.g., glucose, blood pressure}?"")	1 (0.9)	2 (1.8)	11 (10.0)	37 (33.6)	41 (37.3)
29) Document progress toward desired therapeutic objective (s) for each DRPs	1 (.9)	3 (2.7)	14 (12.7)	37 (33.6)	36 (32.7)
30) Document any intervention made in the patient's file, prescription, report, or medical order	1 (.9)	4 (3.6)	9 (8.2)	41 (37.3)	37 (33.6)
31) Document outcomes achieved as a result of the interventions made	1 (.9)	2 (1.8)	6 (5.5)	34 (30.9)	47 (42.7)

Table 4: Importance of pharmacy practice to patients.

Statements	N	Mean	SD
1. Process new and refill prescriptions and provide medication to the patient	93	3.43	.698
2. Counsel patient/patient representative regarding proper use of prescribed medication	94	3.64	.670
3. Counsel patient/patient representative regarding proper use of non-prescription medication	95	3.26	.761
4. Counsel patient/patient representative regarding proper use of self-monitoring devices	95	3.24	.834
5. Develop and manage medication distribution and control systems	91	3.23	.761
6. Manage the pharmacy (e.g. personnel, facilities, operations)	93	3.40	.796
7. Manage medication use systems (D.U.E,D.U.R)	93	3.22	.858
8. Provide patients with general drug information, recommendations, and education.	94	3.55	.666
9. Ask the patient to describe his or her medical condition, including medical problems and symptomatology	95	3.29	.836
10. Ask the patient questions to find out if he/she might be experiencing DRPs	95	3.35	.920
11. Ask the patient questions to find out about the perceived effectiveness of drug he/she was taking	94	3.23	.966
12. Check the patient’s record for potential DRPs	91	3.13	.968
13. When necessary, Intervene with patients and other health care providers to efficiently and effectively communicate and resolve patient problems	96	3.33	.854
14. Document information about the patient’s medical conditions on written records or computerized noted	95	3.22	.936
15. Document all medications currently being taken by the patient on written records or computerized notes	95	3.19	.867
16. Document DRPS, potential or actual, in written records or computerized notes	94	3.13	.895
17. Determine the appropriateness of care prescribed or recommended to the patient	95	3.22	.774
18. Ask the patient what he/she wants to achieve from the drug therapy.	96	3.00	.834
19. When necessary, develop a strategy to resolve or prevent DRPs	92	3.35	.818
20. Document the desired therapeutic objectives for the patient	93	3.08	.888
21. Establish follow-up plans to evaluate the patient’s progress towards his /her drug therapy objectives	93	3.17	.916
22. Use interactive counselling using open-ended questions to optimize the patient’s understanding and commitment to follow-through on medication use and planning	95	3.26	.853
23. Verify that the patient understood the information presented	92	3.37	.722
24. Follow up with patient to establish progress toward drug therapy objectives	92	3.18	.811
25. Ask patients question to ascertain whether the therapeutic objective(s) was (were) being reached	91	3.31	.865
26. Ask patients question to assess how they use their medications	93	3.48	.746
27. Ask patients questions about how they are doing to get an overview of conditions and medications	92	3.40	.826
28. Ask patients about information used to monitor disease and drug therapy (e.g., “What did the doctor tell you about eating potassium-rich foods?” “ What are the results of home monitoring {e.g., glucose, blood pressure}?”)	92	3.25	.834
29. Document progress toward desired therapeutic objective(s) for each DRPS	91	3.14	.877
30. Document any intervention made in the patient’s file, prescription, report, or medical order	97	3.18	.864
31. Document outcomes achieved as a result of the interventions made	90	3.38	.801
Total		101.61	25.715

Table 5: Perceived importance of pharmacy services.

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Discussion

All the respondents were pharmacists in Ogun State. A large number of the respondents had less than 10 years post qualification experience and attempted the definition of pharmaceutical care which is “the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient’s quality of life” [1]. Study revealed that most of them could not define pharmaceutical care but made reasonable attempts. Pharmaceutical care was related to: “patient oriented care /therapy”, “drug therapy”, “counselling patient right”, “rationale use of drug” etc. Majority of the respondents often processed new prescriptions, refill prescriptions and provided medications to their clients. Most of them often counselled patients and their representatives on proper use of both prescription and non-prescription medication and self-monitoring devices. Majority of the respondents manage the pharmacy (personnel, facilities, operation) while quite a number often manage medication use system. Most of the respondents provided patients with general drug information, recommendations and education. They often asked their patients to describe their medical conditions, and questions to explore DRPs. The respondents very often ask the patient questions to find out the perceived effectiveness of medications being used. They interacted with patients and other health care providers to efficiently and effectively communicate and resolve patient medication related problems. Documentation of DRPs, potential or actual is carried out manually and sometimes in computerized form. Most pharmacists in Ogun State practiced traditional pharmacy than pharmaceutical care. Passive pharmaceutical care services however surpassed active pharmaceutical services. This was similar to the findings by Schommer and Cable in which the pharmacists engaged predominantly in drug information source and information [16].

Overall, the respondents interacted with patients and other health care providers to efficiently and effectively communicate and resolve patients potential and actual drug therapy problems. They considered documentation of information about the patient’s medical conditions on written record or computerized systems important. There was need for direct-interaction with both patients and other health practitioners and even new knowledge. Traditional dispensing role denies the direct responsibilities on patient outcomes of drug therapy. Pharmaceutical care practice ensures appropriate, safe, and cost-effective drug therapy to the patients, which eliminates drug-related morbidity and mortality in society [17].

The implementation and practice of pharmaceutical care was supported and improved by measuring, assessing, and improving pharmaceutical care activities while utilizing the conceptual framework of continuous quality improvement [18]. Schommer and Cable conducted a study on Current Status of Pharmaceutical Care Practice: Strategies for education. They found out that pharmacists presently engaged in passive pharmaceutical care activities more frequently than the active ones [16]. They concluded that pharmacists and students need training and professional socialization to encourage a more active type of practice in which comprehensive pharmaceutical care will be provided. This is consistent with this study where the traditional pharmacy practice is still prevalent. Constant training and retraining will facilitate the transition process to an enduring pharmaceutical care practice setting.

Another issue considered was if a single pharmaceutical care model is appropriate for all pharmacy practice situations. When teaching the pharmaceutical care paradigm to students and practitioners, nuances in different practice settings should be considered. A study in Midwest Nigeria indicated that in order to survive, pharmacists must be willing to acknowledge the rapidly occurring changes in health care delivery and accept the reality that the changes will continue [19]. Traditional roles and activities which are no longer needed or valued in the new system should be corrected or modified. Pharmacists will be continuously left behind unless they aggressively step into action and become involved in all critical activities that are underway in the system or practice arena in which they find themselves.

A study involving 282 pharmacists practicing at the outpatient pharmacy of 13 state hospitals, 67 district hospitals, and 7-health clinic in West Malaysia revealed that, knowledge about pharmaceutical care in general was unsatisfactory. Although pharmaceutical care was regarded as, highly important, only 5% of the pharmacists were considered to have adequate knowledge on pharmaceutical care [20]. The first deliverable of the project of the Committee of Experts on Quality and Safety Standards in Pharmaceutical Practices and

Care (CD-P-PH/PC) coordinated by the European Directorate for the Quality of Medicines and Health Care EDQM was a pharmaceutical care survey report undertaken in 2008/2009 [21]. The report analysed and presented conclusions of 58 replies from national public health authorities, doctors', pharmacists', nurses', and patients' associations from 17 countries. It revealed that pharmaceutical care was increasingly being considered an important goal but not yet implemented in practice due to varying levels of awareness and education among healthcare providers, and inadequate cooperation among health care delivery members.

A study on the Attitudes and Perceptions of Healthcare Providers and Medical Students towards Clinical Pharmacy Services in United Arab Emirates revealed that only two-thirds of the medical students knew about the clinical pharmacy program in their institutions during their study period. The study revealed that healthcare providers expected pharmacists to assume an important role in direct patient care especially by playing a supportive role in therapeutic treatment and in patient education and counselling [22]. Another study on pharmacist perception to importance of self-competence in pharmacy practice found out that both the hospital and community pharmacy respondents indicated that carrying out management, dispensing, patient care, and public health activities were important and that they were competent to carry out these activities.⁷ However, the hospital pharmacy respondents showed higher perceptions of the importance of self-competence to most of the current pharmacy practice activities compared to their counterparts in community pharmacy settings. Another study on the provision of pharmaceutical care by community pharmacists across Europe showed that the provision of pharmaceutical care in a comprehensive way was still limited within Europe [23].

In a study of pharmacy students' perceptions of their preparedness to provide pharmaceutical care, students' perceived competencies were found to be similar to those at other institutions [24]. The perceived pharmaceutical care skills grew in a logical fashion as students completed their coursework. Changes in the coursework can impact both actual and perceived pharmaceutical care competencies. A study to show the impact of pharmaceutical care on patients with hypertension and their pharmacist showed that more patients who received pharmaceutical care had controlled blood pressure when compared to the group of patients using standard pharmaceutical services [25]. Pharmaceutical care also had positive effect on the patients' knowledge about disease which is essential in health promotion. Pharmacists, who provided pharmaceutical care improved their pharmacotherapy knowledge and had better satisfaction from work. A study on the future of pharmaceutical care in France among final-year pharmacy students' showed that the students who participated in the study held favourable opinions toward developing new practices that are more patients focused [26].

Conclusion

The study revealed that traditional pharmacy practice was still predominant among the pharmacists. They had varying ideas of pharmaceutical care but lacked the knowledge and practice of the core concept and fundamental principles. Passive pharmaceutical services such as collection, organization, and evaluation of information were seen to be more important than active pharmaceutical care services. Pharmaceutical care practice based on the key indicators was largely undeveloped. The pharmacists showed interest in adopting pharmaceutical care. It underscores the need for increased studies, advocacy and enlightenment towards embracing the trend while encouraging inter-professional collaborations for improved patient care and better outcomes.

Grant

None.

Conflict of Interest

The authors have none to declare.

Learning Points

- This study assessed the provision of traditional pharmacy services versus pharmaceutical care among pharmacists.
- The pharmacists still practice the traditional style.
- They had varying ideas of pharmaceutical care but lacked the knowledge and practice of the core concept and fundamental principles.
- The study suggests that the pharmacists have positive attitude towards adopting pharmaceutical care.

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