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# Barriers to Practice of Pharmaceutical Care in a Tertiary Hospital in Nigeria

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*Abstract* - **Pharmaceutical care continues to gain worldwide acceptance since its introduction over two decades ago. In Nigeria, a variety of forces is slowing down the implementation of pharmaceutical care in healthcare institutions. This study was carried out to determine the barriers to implementation of pharmaceutical care in a tertiary hospital in Nigeria. These were achieved through the use of a prospective, cross-sectional study using a structured, pretested and self-administered questionnaire to 55 hospital pharmacists in Asaba in July 2018. The four-part Questionnaire evaluated demographics of respondents, knowledge of and reasons for not implementing pharmaceutical care and willingness to practice pharmaceutical care if perceived barriers were removed. Data obtained were analyzed using SPSS Version 22. Descriptive and chi square statistics were obtained. A P-value of less than 0.05 was considered statistically significant. A total of 55 questionnaires were administered to hospital pharmacists practicing at the Federal Medical Centre, Asaba, in 2018. Fifty questionnaires were returned, giving a response rate of 90.9%. Majority (80.0%) were aged 21-30 years, there were more females (56.0%) than males, most were single (74.0%), a third (34.0%) were holders of the Doctor of Pharmacy degree, nearly half (42.0%) were in practice for less than one year. Barriers identified were difficulty in accessing patients clinical and laboratory data, lack of acceptance by physicians and nurses, lack of space, inadequate number of pharmacists, pharmaceutical care is not feasible without financial incentives, pharmaceutical care required too much time, lack of clinical knowledge, Pharmaceutical care required too much effort, and lack of communication skills. Analysis of sex versus respondents was significant for those who felt pharmaceutical care was not feasible without financial incentives. ($\chi^2$ = 12.236, *P = 0.022) with female respondents taking the lead (56.0%). This study revealed barriers that are militating against the practice of pharmaceutical care in the study area. Concerted efforts to address these challenges that will involve the management of the hospital, update lectures, attitudinal change by pharmacists and introduction of remuneration for additional services rendered by pharmacists are recommended.**
*Keywords:* **Barriers, Pharmaceutical Care, Hospital Pharmacists**

## I. INTRODUCTION

Pharmaceutical care continues to gain worldwide acceptance since its introduction over two decades ago. Pharmaceutical care is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life [ 1], [2], [3]. It is a collaborative process that aims to prevent or identify and solve medicinal product and health related problems. In several countries across the world, the role of pharmacists has rapidly evolved from drug distribution and dispensing to a gradual acceptance and implementation of pharmaceutical care [3]. Drug therapy problems are the focus of pharmaceutical care [3]. Good pharmaceutical care requires that the patient's disease state and medication needs be identified [4]. The patient needs to be motivated through pharmacists' education to understand the desired outcomes of care and to take an active role in the treatment process [5].

Pharmaceutical care requires pharmacists to acquire skills, qualifications and capacity to be able to overcome the challenges and obstacles that go with such responsibility. Barriers to implementation of pharmaceutical care can be grouped under pharmacists' attitude, lack of pharmaceutical care skills, resource related constraints, systems related constraints, inter-professional obstacles and academic obstacles [3]. Because pharmaceutical care is practitioner driven, barriers pertaining to the pharmacist are the most important [3]. These include knowledge, attitudes, skills and understanding of pharmaceutical care. Pharmacists attitude include lack of comprehension, misconceptions, fear of change, lack of motivation and inertia. Resource related constraints include lack of time, finance, space, personnel and management issues [3].

Systems related constraints include issues of reimbursement, acceptance by physicians and nurses and lack of access to patient records. An example of academic obstacle is the fact that pharmacy curricula have not been focused on pharmaceutical care. Lack of pharmaceutical care skills includes issues with inadequate knowledge of therapeutics, lack of communication skills, documentation and drug information [3]. Negative attitude of pharmacists is a major barrier to pharmaceutical care [3]. A major system related barrier in healthcare settings is the lack of a comprehensive, ongoing process for defining the appropriate outcomes of drug therapy [6]. A primary setback to the implementation of pharmaceutical care in our environment is the lack of articulated standards for pharmacists to conform to in their daily practice [7].

Several studies have been carried out in Nigeria and elsewhere on the challenges to practice of pharmaceutical

care [ 8], [9], [10], [11], [12], [13], [14], [15], [16], [17], [18], [19], [20], [21], [22], [23], [24], [25], [26], [27]. These studies revealed barriers to include lack of personnel, lack of collaboration with other healthcare providers; lack of space, non-acceptance by physicians and nurses, lack of pharmaceutical care skills and the fact that pharmaceutical care is time consuming. A study in Asaba revealed that pharmacists attitude, lack of standards and lack of space were all hindrances to implementation of Pharmaceutical care [13]. This study determined the barriers to implementation of pharmaceutical care in a tertiary institution in Nigeria.

## II. METHODOLOGY

### *A. Study Design*

A prospective study involving the use of structured, self-administered questionnaires was carried out on 50 hospital pharmacists practicing at the Federal Medical Centre, Asaba, Nigeria, to evaluate the barriers to practice of pharmaceutical care.

### *B. Setting*

The study was carried out at Asaba, capital of Delta State and home to the Anwai Campus of the Delta State University. The Federal Medical Centre Asaba was created by the government of Chief Olusegun Obasanjo in 1999. The hospital inherited the structures of the former Central Hospital, Asaba located on Anwai Road. The hospital is a 200-bed hospital with well over 8 wards including the Accident and Emergency Ward, Male and Female Medical Wards, Male and Female Orthopedic Wards, Surgical Wards as well as Obstetrics and Gynaecology Wards (Maternity Complex). There is also the Amenity Ward and Pediatric Ward. The Hospital offers full range of medical services in obstetrics, gynaecology, ophthalmology, orthopaedics, paediatrics, pharmacy, radiology, ear, nose, and throat, internal medicine, oral surgery, community health and anaesthesia.

The hospital has a staff strength of about 1,500 workers, comprising medical consultants, residents, medical officers, pharmacists, nurses, medical laboratory scientists, physiotherapists, community health workers and others. The hospital is being managed on daily basis by a top management team comprising the medical director, chairman medical advisory committee, director of administration and director of finance.

Delta state has a population made up of 2,069,309 males and females 2, 043,136, [28] and was created on 27th August 1991, with Asaba as the capital. It is one of the oil producing states of the country. Other mineral deposits in the state include lime, kaolin, laterite and clay. The state is situated in the South-South Geo-Political Zone of Nigeria. Asaba is strategically located on a hill, at the Western edge of the majestic River Niger. The River Niger is a trans- West African link beginning from the Futa Jalon highlands in Guinea and empties into the Atlantic Ocean in the Niger Delta region of Nigeria. The greater Asaba occupies a land mass of over 300 square kilometers. Since becoming the Delta State capital, Asaba has grown in population from the last census figure of 149,603 [29] in 2006. The people are very hospitable, and Asaba now maintains a cosmopolitan population of predominantly non-indigenous people [29].

### *C. Study Population*

The study population comprised 50 hospital pharmacists that practice at the hospital. The Pharmacy Department boasts of a staff strength of 30 regular pharmacists and 30 intern pharmacists, bringing the total to 60. The department boasts of over 10 satellite Pharmacy units comprising Accident and Emergency Pharmacy, In Patient Pharmacy, General Outpatient Clinic Pharmacy, Public Health Pharmacy, Paediatric Pharmacy, National Health Insurance Pharmacy, Obstetrics and Gynaecology Pharmacy, Drug Revolving Fund Pharmacy, Ophthalmic Pharmacy and Pack Unit Pharmacy. Each of these units is headed by a deputy director, assistant director or chief pharmacist. The study population was made up of pharmacists working in the Pharmacy Department which comprised deputy directors, assistant directors, chief pharmacists, principal pharmacists, senior pharmacists, pharmacists Grade1 and intern pharmacists.

### *D. Sampling Method*

Well structured, self-administered questionnaires were randomly pretested on 5 pharmacists in the department after which minor errors in typing and outlay were corrected, before the corrected questionnaires were administered to the general body. Informed consent was sought and obtained from respondents before they received the questionnaires. Consent to undertake the study was obtained from the leadership of the Pharmacy Department and the hospital management.

## III. DATA COLLECTION AND ANALYSIS

A total number of 55 questionnaires were self-administered to pharmacists. The questionnaire was made anonymous, with open questions in some cases and were structured into 4 parts to enable researchers evaluate demographics of respondents, knowledge of and reasons for not implementing pharmaceutical care and willingness to practice pharmaceutical care if perceived barriers were removed.

The essence of the open questions was for the respondents to volunteer additional information in the desired areas. The questionnaires were collated, and data fed into the computer and analyzed using Statistical Package for Social Sciences (SPSS Version 22). Results were presented as frequency and percentage of variables. Chi Square statistics was used to test for level of significance of barriers to practice. A P-value of less than 0.05 was considered to be statistically significant.

## IV. RESULTS

A total of 55 questionnaires were administered to the respondents, 50 questionnaires were returned, giving a response rate of 90.9%. Majority (80.0%) were aged 21-30 years, there were more females (56.0%), than males, majority (74.0%) were single, a third (34.0%) were holders of the Doctor of Pharmacy degree, nearly half (42.0%) were in practice for less than one year. All other demographic information is as contained in Table I. In response to a question about whether they have heard of pharmaceutical care before, nearly all (96.6%) answered yes as shown in Table II.

TABLE I DEMOGRAPHICS OF RESPONDENTS, N= 50

| Variable | Frequency | Percent (%) |
|---|---|---|
| **Age (years)** | | |
| 21-30 | 40 | 80.0 |
| 31-40 | 5 | 10.0 |
| 41-50 | 2 | 4.0 |
| 51-60 | 3 | 6.0 |
| **Sex** | | |
| Male | 22 | 44.0 |
| Female | 28 | 56.0 |
| Marital status | | |
| Single | 37 | 74.0 |
| Married | 12 | 24.0 |
| No Response | 1 | 2.0 |
| **Educational Status** | | |
| B.Pharm | 28 | 56.0 |
| Pharm D | 17 | 34.0 |
| Masters | 1 | 2.0 |
| FPC Pharm | 3 | 6.0 |
| PhD | 1 | 2.0 |
| **Length of Practice (years)** | | |
| < 1 | 21 | 42.0 |
| 1-5 | 17 | 34.0 |
| 6-10 | 6 | 12.0 |
| 11-15 | 2 | 4.0 |
| > 15 | 3 | 6.0 |
| No Response | 1 | 2.0 |

TABLE II SHOWING NUMBER OF RESPONDENTS THAT HAVE HEARD OF PHARMACEUTICAL CARE, N= 50

| Have you Heard of Pharmaceutical Care Before | Frequency | Percent |
|---|---|---|
| Yes | 48 | 96.0 |
| No response | 1 | 2.0 |
| No | 1 | 2.0 |
| Total | 50 | 100.0 |

Barriers identified were patients do not want their data evaluated (39.8%), difficulty in accessing patients' clinical and laboratory data (83.4%), lack of clinical knowledge (49.7%), lack of acceptance by physicians and nurses (75.6%), pharmaceutical care is not feasible without financial incentives (51.2%), lack of space (91.6%), inadequate number of pharmacists (84.7%) and pharmaceutical care requires too much effort (39.4%). Others were conducting patient interview is the work of physicians (31.4%), pharmaceutical care requires too much time (51.2%) and lack of communication skills (56.1%), Table III.

When asked if they will still practice pharmaceutical care if barriers are removed, majority (76.0%) answered yes, as shown in Table IV. Analysis of sex versus respondents that felt pharmaceutical care is not feasible without financial incentives was significant at $\chi^2 = 12.236$, *P = 0.022 with female respondents taking the lead (56.0%) All other associations were not statistically significant.

TABLE III SHOWING BARRIERS TO PRACTICE OF PHARMACEUTICAL CARE

| Variable | Strongly Agree (%) | Agree (%) | Not Sure (%) | Disagree (%) | Strongly Disagree (%) | No Response (%) |
|---|---|---|---|---|---|---|
| Lack of clinical Knowledge | 4 (18.2) | 9 (31.5) | 3 (9.0) | 14 (25.2) | 18 (16.2) | 2 (0) |
| Difficulty accessing patients clinical and laboratory data | 12 (10.4) | 21 (73.0) | 4 (3.5) | 4 (7.0) | 7 (6.1) | 2 (0) |
| Lack of acceptance by Physicians/nurses | 15 (45.5) | 13 (30.3) | 6 (12.1) | 6 (7.3) | 7 (4.2) | 3 (0) |
| PC is not feasible without financial incentives | 3 (11.8) | 13 (39.4) | 13 (31.5) | 6 (9.5) | 10 (7.9) | 5 (0) |
| Lack of space | 27 (66.8) | 13 (24.8) | 3 (5.0) | 3 (3.0) | 1 (0.5) | 3 (0) |
| Inadequate number of pharmacists | 18 (49.5) | 16 (35.2) | 5 (8.2) | 5 (5.5) | 3 (1.7) | 3 (0) |
| PC requires too much effort | 4(17.5) | 6 (21.9) | 7 17.8) | 18 (31.6) | 13 (13.2) | 2 (0) |
| Conducting patient interview is the role of physicians | 3 (15.2) | 4 (16.2) | 5 (15.2) | 17 (35.4) | 18 (18.2) | 3(0) |
| PC requires too much time | 6 (23.6) | 9 (27.6) | 7 (15.8) | 16 (25.2) | 10 (7.9) | 2 (0) |
| Lack of communication skills | 5 (19.2) | 12 (36.9) | 8 (18.5) | 10 (15.4) | 13 (11.5) | 2 (0) |
| Patients do not want their prescriptions evaluated | 3 (15.3) | 6 (24.5) | 2 (2.0) | 22 (44.9) | 13 (13.3) | 4 (0) |

PC = Pharmaceutical care

TABLE IV SHOWING PERCENTAGE OF RESPONDENTS WILLING TO PRACTICE PHARMACEUTICAL CARE AFTER BARRIERS ARE REMOVED, N= 50

| Would you Still Practice PC if Barriers are Removed? | Frequency | Percent |
|---|---|---|
| Yes | 38 | 76.0 |
| No Response | 10 | 20.0 |
| No | 2 | 4.0 |
| Total | 50 | 100.0 |

PC= Pharmaceutical care

## V. DISCUSSION

The results from this study revealed there were more females in the study area compared to males. A good number of respondents possessed the Doctor of Pharmacy degree where they would been taught the rudiments of pharmaceutical care, including barriers to practice. This explains the high knowledge of pharmaceutical care recorded by respondents in the study. The results revealed that majority of respondents were single, belonged to the 21-30 years age bracket and had been in practice for less than one year. This result tends to suggest that intern pharmacists formed the majority of respondents in the study, and this can be explained by the fact that there were 30 interns undergoing their internship at the centre during the period of this study.

Barriers identified in this study included the fact that patients did not want their data evaluated, but only a third of respondents agreed with this. Majority of respondents agreed that difficulty in accessing patients clinical and laboratory data was a barrier. About half of all respondents agreed that lack of clinical knowledge posed a barrier while most said lack of acceptance by physicians and nurses was an obstacle. Half of the respondents were of the opinion that pharmaceutical care is not feasible without financial incentives. Nearly all respondents agreed that lack of space was a major barrier to the practice of pharmaceutical care. Similarly, majority said inadequate number of pharmacists was a problem. Few agreed that pharmaceutical care requires too much effort. Very few were of the opinion that conducting patient interview is the work of physicians. Half of respondents agreed that pharmaceutical care requires too much time while another half revealed that lack of communication skills was a barrier.

This study revealed that resource related constraints such as lack of space (91.6%) and inadequate number of pharmacists (84.7%) were major barriers to practice. Similarly, systems related constraints such as difficulty in accessing patients clinical and laboratory data (83.4%) and lack of acceptance by physicians and nurses (75.6%) were also major barriers to practice in the study area [13].

The results of this study are similar to that carried out in Bayelsa and Rivers States [12] which identified time limitation, space limitation, lack of skills, cost limitation and perception that pharmaceutical care is not relevant as some reasons for not practicing Pharmaceutical care in Nigeria [12]. The results from this study also compare with that of the Indian Study [26] which concluded that lack of time, personnel, lack of administrative support, acceptance of these services from other healthcare professionals and lack of documentation systems were barriers to pharmaceutical care implementation [26]. The difference between the studies was the finding that lack of documentation systems was a barrier in the Indian Study unlike this Study. This study results are in line with those of earlier studies carried out on pharmaceutical care implementation in Asaba [ 13], [14].

The results are also in line with the Enugu Study [21] which revealed key limitations to pharmaceutical practice to include pharmacists' attitude, lack of pharmaceutical care skills, interprofessional and academic obstacles like lack of collaboration and lack of role models. The difference being that lack of role models and pharmacists attitude were listed as barriers in Enugu, whereas they were not identified in this study.

The results from this study are also similar to the United Arab Emirate Study [30] which revealed that lack of time, insufficient staff number and lack of motivation were the main barriers to implementation of pharmaceutical care by community pharmacists in the United Arab Emirate. This study also compares with the European Study [5] that concluded that time and money are perceived to be major barriers both in absolute and relative rankings, with a recommendation that European pharmaceutical associations need to pay attention to remuneration issues before attempting to implement pharmaceutical care in their countries.

## VI. CONCLUSION

This study revealed barriers that are militating against the practice of pharmaceutical care in the study area. Concerted efforts to address these challenges that will involve the management of the centre addressing the observed barriers, introduction of remuneration for additional services rendered by pharmacists, update lectures and attitudinal change by pharmacists are recommended. Pharmacists must confront and overcome the time and space barriers observed in this study if the objectives of pharmaceutical care are to be achieved. Additionally, there is need for pharmacists to create time for counseling services while allowing pharmacy technicians to become more involved in core dispensing activities.

## VII. LIMITATIONS OF STUDY

This study was carried out on the pharmacists working in the Pharmacy Department who were only 60 in number as at the time of the study. This explains why a sample size of only 50 pharmacists was used for the study. The veracity of information supplied by respondents in this study could not be independently verified.

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## REFERENCES

[1] C. D. Hepler and L. M. Strand, "Opportunities and responsibilities in pharmaceutical care," *American Journal of Hospital Pharmacy,* Vol. 47, pp. 533-543, 1990.

[2] S. S. Allemann, J. W. F. Van Mill, L. Botermann, K. Berger, N. G. Kurt and E. Hersberger, "Pharmaceutical care: the PCNE definition 2013," *Int J Clin Pharm,* Vol. 36, pp. 544-555, 2014.

[3] A. C. Oparah, *Essentials of Pharmaceutical Care*. A Cybex Publication, pp. 4-28, 2010.

[4] R. K. Campbell, "Confronting barriers to Pharmaceutical Care," *Journal of the American Pharmaceutical Association,* Vol. 38, No. 4, pp. 410-412, 1998.

[5] J. W. F. Van Mil, W. O. De Boer, F.J. Tromp, "European barriers to the implementation of pharmaceutical care," *IJPP*, Vol. 9, No. 3, pp. 163-168. 2001.

[6] J. R. May, "Barriers to pharmaceutical care in the acute setting," *Am J Hosp Pharm,* Vol. 50, pp. 1608-1611, 1993.

[7] P. O. Erah and J. C. Nwazuoke, "Identification of Standards for pharmaceutical care in Benin City," *Trop J Pharm Res*, Vol. 1, No. 2, pp. 55-66, 2002.

[8] L. V. Minard, H. Deal, M. E. Harrison, K. Toombs, H. Neville and A. Meade, "Pharmacists Perceptions of the Barriers and Facilitators to the implementation of Clinical Pharmacy Key Performance Indicators," *PLoS ONE*, Vol. 11, No. 4, 2016, e0152903. [Online]. Available: https://journals.plos.org, Accessed on 16th August 2018.

[9] J. A. Dunlop and J. P. Shaw, "Community Pharmacists; perspectives on pharmaceutical care implementation in New Zealand," *Pharm World Sci*, Vol. 24, pp. 224-230, 2002.

[10] R. N. Okoro and B. F. Ibrahim, "Hospital Pharmacists Knowledge of Pharmaceutical Care in Maiduguri, Northeastern Nigeria," *Pharmacie Globale; Roorkee,* Vol. 3, No. 8, pp. 1-5, 2012.

[11] J. M. Okonta, E. O. Okonta and T. C. Ofoegbu, "Barriers to implementation of Pharmaceutical Care by Pharmacists in Nsukka and Enugu Metropolis of Enugu State," *Journal of Basic and Clinical Pharmacy*, Vol. 33, No. 2, pp. 295-298. 2012.

[12] B. A. Joseph and J. F. Eniojukun, "Attitude of pharmacists to the Pharmaceutical care concept in Rivers and Bayelsa States of Southern Nigeria," *IOSR Journal of Pharmacy*, Vol. 4, No. 11, pp. 10-16, 2014.

[13] K. C. Amibor, C. S. Onyegasi and P. I. Ezeudu, "Knowledge, Attitude and Practice of Pharmaceutical Care among pharmacists in a state in Nigeria," *African Journal of Pharmaceutical Research and Development,* Vol. 10, No. 1, pp. 22-31, 2018.

[14] K. C. Amibor and C. Okonta, "Attitude and Practice of Community Pharmacists towards Pharmaceutical Care," *Journal of Drug Delivery and Therapeutics*, Vol. 9, No. 6-S, pp. 164-71, 2019.

[15] C. Rossing, E. H. Hansen and I. Krass, "Barriers and facilitators in pharmaceutical care: perceptions and experiences among Danish community pharmacists," *J. Soc. Adm. Pharm*, Vol. 19, pp. 55-64, 2000.

[16] C. C. Mmuo, O. C. Muoghalu and C. G. Onyeka, "Challenges in the practice of Pharmaceutical Care in National Orthopedic Hospital, Enugu," *International Journal of Pharmaceutical Sciences,* Vol. 3, No. 3, pp. 207-212, 2013.

[17] A. Awad, S. Al-Ebrahim and E. Abahussain, "Pharmaceutical care services in hospitals of Kuwait," *J Pharm Sci,* Vol. 9, No. 2, pp. 10-18, 2006.

[18] A. C. Oparah, and A. E. Eferakeya, "Attitudes of Nigerian pharmacists towards pharmaceutical care," *Pharmacy World and Science,* Vol. 27, No. 3, pp. 208-214, 2005.

[19] N. Surachat, C. L. Shu, "Thai pharmacists' understanding, attitudes, and perceived barriers related to providing pharmaceutical care," *American Journal of Health System Pharmacy*, Vol. 63, pp. 2144-2150, 2006.

[20] M. S. El Hajj, H. S. AL-Saeed and M. Khaja, "Qatar pharmacists' understanding, attitudes, practice and perceived barriers related to providing pharmaceutical care," *Int J Clin Pharm*, Vol. 38, pp. 330, 2016.

[21] B. E. Ogbonna and A. C. Oparah, "Limitations to the dynamics of pharmaceutical practice among community pharmacists in Enugu urban, southeast Nigeria," *Integrated Pharmacy Research and Practice*, Vol. 4, pp. 49-55, 2015.

[22] B. G. Swift, "Barriers to pharmaceutical care in the home care setting," *Am J Hosp Pharm*, Vol. 50, pp. 1611-1614, 1993.

[23] N. Louie, and N. Robertson, "Barriers to pharmaceutical care in the managed care setting," *Am J Hosp Pharm*, Vol. 50, pp. 1614-1617, 1993.

[24] H. U. Ma'Aji and S. I. Ondeku, "Assessment of Knowledge, Attitude, and Practice of Community Pharmacists towards Pharmaceutical Care in Kaduna State, Nigeria" *IJPTP*, Vol. 5, No. 2, pp. 972-976, 2014.

[25] I. A. Suleiman and O. Onaneye, "Pharmaceutical Care Implementation: A Survey of Attitude, Perception and Practice of Pharmacists in Ogun State, South-Western Nigeria," *International Journal of Health Research,* Vol. 4, No. 2, pp. 91-97, June 2011.

[26] N. Sreellalitha, E. Vigneshwaren, G. Y. Narayana, R. Padmanabha and R. M. Ramakesava, "Review of Pharmaceutical Care Services provided by the Pharmacists," *International Research Journal of Pharmacy*, Vol. 3, No. 4, pp. 78-79, 2012.

[27] M. S. De Castro and C. J. Correr, "Pharmaceutical care in community pharmacies: practice and research in Brazil," *The Annals of Pharmacotherapy*, Vol. 41, No. 9, pp. 1486-1493, 2007.

[28] National Population Commission, Delta State. [Online]. Available: www.population.gov.ng, Accessed 15th September 2018.

[29] About Asaba. [Online]. Available: https://asaba.com, Accessed 17th August 2018.

[30] R. M. Ghazal, N. A. G. Hassan, O. Ghaleb, A. Ahdab and I. I. Saliem, "Barriers to the implementation of Pharmaceutical care into the UAE community pharmacies," *IOSR Journal of Pharmacy*, Vol. 4, No. 5, pp. 68-74, 2014.