



**PHARMACEUTICAL CARE SERVICES DELIVERY AND BUSINESS PERFORMANCE
OF COMMUNITY PHARMACIES IN PORT HARCOURT, RIVERS STATE, NIGERIA**

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ABSTRACT

Background: Pharmaceutical care concept has become a dominant form of practice for pharmacists globally after its emergence over two decades ago and this philosophy of practice has seen the birth of a new paradigm that has reoriented pharmacy practice from a product oriented one to an outcome oriented practice that is patient centered where pharmacists take responsibilities in a collaborative manner to improve patients' quality of life. **Objective:** The specific objectives include to determine if any relationship exist between medications therapy management, patient education/counseling, ethical dispensing practice and three proxies of business performance namely- sale turnover, profitability and customer loyalty. **Methods:** Cross sectional survey design was adopted for this study. Out of a population of 304 community pharmacies in Port Harcourt, a sample size of 173 community Pharmacies was determined using the Taro Yamane formula with a sampling error of 0.05. A well-designed questionnaire was drafted and administered on respondents who are superintendent pharmacists of the randomly selected pharmacies and 1,384 patients who are customers to the pharmacies. Spearman rank correlation was used to show the strength of relationship between the dimensions and measures of the predictor and criterion variables of the study. **Results:** The study shows that there is a positive correlation between the patient education /counselling, and customer satisfaction, sales turnover and profitability with r values of +0.9532, +0.9532 and +0.9156 respectively at $p < 0.05$. The correlation (r) between patient counselling ethical dispensing practice and customer satisfaction, sales turnover and profitability are +0.9999, +0.936 and 0.9883 ($p < 0.050$) respectively while a strong correlation was also obtained between medication therapy management and customer satisfaction, sales turnover and profitability with r values of +0.9702, +0.9717 and +0.9527 ($p < 0.05$) respectively. **Conclusion:** This study shows that there is strong relationship between the practice of pharmaceutical care by community pharmacies and their business performance.

KEYWORDS: Pharmaceutical care, Business success, Customer satisfaction, Sales turnover and Profitability.

INTRODUCTION

Pharmaceutical care is a new paradigm in the philosophy of pharmacy practice whose emergence about two decades ago has greatly altered the dynamics of pharmacy practice globally from the traditional product-oriented approach that revolved principally around medication dispensing to the modern approach that is patient centered and outcome oriented. This new practice philosophy has placed a demand for expansion in the scope and content of pharmacy curriculum to reflect the realities of these modern global best practices in the delivery of pharmaceutical care services. Although pharmaceutical care has been adjudged as a gold standard for pharmacy practice in clinical settings, its implementation has been slow and challenging. Diverse views and opinions have been expressed by different scholars and researchers since the construct was introduced. Thus globally, a consensus has not been

reached about the definition of pharmaceutical care. This perhaps may be explained by the diversity in health care system structures and pharmacy practice systems being adopted by different countries globally. However, Helper and Strand (1989) defined pharmaceutical care as the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life. This definition has gained so much acceptance as it aptly describes what the concept entails and the whole essence or expectations (outcomes) envisaged from the delivery of these services. These outcomes can be evaluated in terms of cure of disease, elimination or reduction of a patient's symptoms, arresting or slowing a disease process or preventing a disease as well as symptoms.

The interactions between pharmacists and patients could be harnessed towards preventing and resolving so many

adverse drug events and other iatrogenic diseases that may arise from drug misadventures by many patients albeit ignorantly. The philosophy of pharmaceutical care is targeted at meeting a social need. It is therefore imperative to optimize medication use geared towards the minimization of drug related morbidity and mortality globally. The delivery of these pharmaceutical care services is not expected to be solely motivated by economic gains (Robert, Linda & Peter, 2012). Pharmaceutical care concept also emphasizes that the practitioner should ensure that patients be placed on medications that are specific and tailored at achieving their health-related needs and goals while also striving to optimize their experiences. It is therefore necessary that treatment regimen designed for each patient is not only appropriate for him at the right dose and duration but should also be well monitored (Robert, Linda & Peter, 2012). Patient centered approach is a corollary to the philosophy of pharmaceutical care. The delivery of pharmaceutical care services is based entirely on the drug related needs of the patient as against the personal choices and preferences of the pharmaceutical care practitioner. The practice is therefore driven by the rationalized drug related needs of the patient that must be addressed and cared for by the pharmacist practicing pharmaceutical care.

The implementation of pharmaceutical care has not been without some challenges. Researchers have identified some of these perceived challenges to the implementation of pharmaceutical care to include problems in education, poor professional skills, lack of required resources and environmental barriers (Berenguer *et al.* 2004). Pharmaceutical care practice involves an active collaboration between the pharmacist and the patient on one hand and also the inter professional collaboration between the pharmacist and other health care professionals in designing, implementing and monitoring a therapeutic plan that will produce specific therapeutic outcomes for the patient. The general purpose for the practice of pharmaceutical care is to deliver the necessary health benefits to the patient and in doing that, a mutual understanding based on collaborative effort with all the care givers is imperative. The professional training of pharmacists and their ease of access places them at a vantage position to provide rational drug therapy to patients with due consideration for safety, efficacy, quality, and cost. It is therefore expedient for pharmacists to work in a collaborative manner with other health professionals to promote health, prevent diseases, assess, monitor, initiate and modify medication use to assure the safety and effectiveness of drug therapy regimens (Mason, 2001).

Pharmaceutical care functions basically include: Drug information service, medication therapy management, online pharmaceutical information, drug dispensing, patient counselling, provision of routine check-up programs, customer service, interpretation of patient's drug related needs, patient's education, questioning,

clarification, verification, validation of all drug-related orders as well as other value-added services. (Ogbonna, Ilika & Nwabueze, 2015).

There is need to determine how implementation of these aspects of pharmaceutical care can influence the business performance of community pharmacies. Cherrington (1989) considered performance as "a concept of success or effectiveness of an organization, and as an indication of the organizational manner that it is performing effectively to achieve its goals successfully". Peterson *et al* (2003) are of the view that organizational performance centralizes on the 'capacity and ability' of an organization to utilize available resources efficiently and economically to achieve results as well as outcomes consistent with the set aim of the organization, also considering their relevance to users generally. Performance measurement system is a concise and defined set of measures that supports the decision-making process of an organization by collecting and analyzing quantified data of performance information (Gimbert *et al*, 2010). Based on these definitions it is apt to state that performance evaluation of organizations is based on the measurable progress made by organizations in terms of achieving organizational strategies for success using relevant indicators.

Different models for measuring performance of organizations have been postulated by management scholars. For the purpose of this research the balance score card model was used in evaluating the business performance of community pharmacies. This business performance measurement model was developed by Robert Kaplan and David Norton in the early 1990's and it takes cognizance of both financial and nonfinancial performance indicators to appraise the business performance of organizations. Business performance management entails reviewing the overall business performance and determining how the business can better reach its goals. This requires the alignment of strategic and operational objectives and the business' set of activities in order to manage performance.

Business performance of a community pharmacy can be evaluated using both financial and non-financial performance indicators while adopting the balanced score card model approach. Financial performance is subjective and it is a measure of how well a firm can use assets at its disposal to generate revenues. It is also an indication of a firm's general financial health over a stipulated time frame. There is increasing need to evaluate financial performance of every business so as to aid decision making with respect to growth and achieving organizational goals. The pharmacy business (community pharmacy as being studied) is not left out, as it is necessary to evaluate financial performance from time to time to ascertain their financial health. Financial data obtained are utilized to fine-tune the operation of the business in order to manage costs and clinical care procedures, monitor quality services and publish

information utilized within and outside the organization. The financial management is a dynamic process that requires environmental adaptation and other notable organization's changes and services, in order to meet the organization's strategic goals (Vermeulen *et al.*, 2007; Doucette *et al.*, 2012). Two key financial indicators that were employed in analyzing business performance of community pharmacies in this research are Profitability and Sales Turnover.

The non-financial indicators were introduced by Kaplan and Norton in the Harvard Business review in 1992 as being complementary to the financial measures using the balanced score card model for evaluating business performance of organizations. The balance score card model reckons with those internal business processes that can be harnessed towards satisfying the customers. When customers are satisfied, they are most likely to be loyal and customer loyalty is sine qua non to building a solid customer base that is required for profitability. Prieto and Revila (2006) designed key non-financial performance indicators which were listed as Customers' satisfaction, customers' loyalty, quality of products and services, employees' satisfaction and Organizational reputation. One of the strategic goals of an organization is to improve customers' satisfaction and consequently gain more loyal customers which in turn reflect in its financial return (Fornell *et al.*, 1996).

Customer satisfaction is the non-financial measure of performance used in this study. The importance of customer satisfaction as a performance measure has been emphasized by Wilson (2002) who posited that customer satisfaction evaluation is the largest annual market research a firm or an organization makes. Customers' satisfaction is defined as "the consumers' response to the evaluation of the perceived discrepancy between prior expectations and the actual performance of the product or service as perceived after its consumption" (Edvardson, 1998). Within the context of pharmaceutical services delivery, we are more concerned about patient satisfaction as beneficiaries of pharmaceutical services delivery. Patient satisfaction underscores the extent of fulfilment in terms of needs, desires and expectations that patients derive from the services received from health care practitioners and institutions. It is also defined as the extent as well as level of positivity shown by the patient, having used or received a given service. It also tells the extent at which a patient's expectations over a service are actualized i.e., the difference between a patient's expectation and actual service received (Iftighar *et al.*, 2011).

Pharmacy profession is unarguably a vital component of modern healthcare practice mix, especially community pharmacy practice which has been touted as the most accessible healthcare establishment. However, community pharmacy practice in Nigeria is being threatened in terms of profitability/financial viability, as manifested in the increasing number of pharmacy outlets

becoming obsolete and liquidating. This indeed calls for urgent attention. Community pharmacy practice has traditionally been known to be a highly profitable business that has captured the attention of pharmacists with entrepreneurial dispositions. Considering the increasing level of acceptance of pharmaceutical care service and patient-focused pharmacy practice globally, it might not be out of place to speculate that, the design and nature of pharmaceutical care may have a great potential of driving and sustaining community pharmacy businesses.

The society is evolving with more people being enlightened on daily basis about what pharmaceutical care practice as well as pharmaceutical services delivery entails in our present dispensation. However, most community pharmacists are yet to realize the potential impact of pharmaceutical care services delivery on the viability and sustainability of their businesses in terms of financial and non-financial performances. Unfortunately, there has been paucity of research carried out with respect to the variables of this study in Nigeria. Thus, this research aims at bridging this intellectual gap, as well as seeks to investigate possible impact of pharmaceutical care services on the growth and sustainability of community pharmacies in this modern era.

AIM AND OBJECTIVES

The aim of the research is to determine the relationship between pharmaceutical care service delivery and business performance of community pharmacies in Rivers state, Nigeria.

The objectives are

- To determine the relationship between pharmaceutical care services delivery and customers' satisfaction in community pharmacies in Rivers State.
- To determine the relationship between pharmaceutical care services and sales turnover of community pharmacies in Rivers State.
- To determine relationship between pharmaceutical care services and profitability of community pharmacies in Rivers State.

METHODS

Correlational research design was adopted for the study using the survey method.

Instrument for data collection

Two sets of well-structured questionnaires were designed as instruments for data collection from the respondents. The first set of questionnaires was designed to be responded to by superintendent Pharmacists of the community pharmacies under study to assess their level of pharmaceutical care services delivery and the business performance of their respective pharmacies while the second set of questionnaires was administered on patients/customers primarily to assess their extent of

satisfaction with pharmaceutical care services received from the community pharmacies. The pharmacist's respondent questionnaire was divided into two parts. The first part was designed to collect demographics while the second part was designed to get information from the community pharmacists with respect to pharmaceutical care services delivery and business performance of their respective pharmacies. The patient/customer respondent questionnaire was divided into three sections. Section A was designed to collect respondents' demographic data. Section B assessed the level of pharmaceutical care services delivery of the pharmacies while section C was designed to assess patients/customers satisfaction with the pharmaceutical services delivered. The two questionnaires were designed using a 5-point Likert scale.

Validation of instrument

The two sets of questionnaires were subjected to face validation by senior academic staff including the Head of Department of Clinical Pharmacy and Management, University of Port Harcourt, Nigeria.

Following the validation, some corrections were made which involved addition and deletion of some items. The final questionnaire was then considered suitable for proper data collection.

Study area

The study area for the research are the two local government areas which make up Port Harcourt, the capital city of Rivers State and these include Obio/Akpor local government area and Port Harcourt city local government area.

Population of study

The study population for this research include all the 304 pharmacies that are registered with the Pharmacists council of Nigeria and are located in Port Harcourt, the capital of Rivers State.

Sample size determination/Sampling technique

The number of community pharmacies to be involved in the survey was determined using the Taro Yamane formula (1967): $n = \frac{N}{1+N(e)^2}$

Where, n = sample size; N = total population; e = allowable error (0.05)

The number of community pharmacies to be involved in the survey was determined to be 173

The number of patients/clients was put at 8 per Community Pharmacy totaling 1,384.

Simple random sampling technique was adopted in administering the questionnaires on the superintendent pharmacists of the pharmacies drawn from the sampling frame for the study while purposive sampling technique was adopted in getting the patients of the various randomly chosen pharmacies for the study. The patient

respondents were allowed to fill the questionnaires at their convenience and unguided to avoid social desirability confounding.

Ethical considerations

Both community pharmacist respondents and patient respondents were all allowed to make up their mind to be part of the study. The purpose of the study was properly explained to the participants in order to elicit informed consent from participants. All participants in the study were also assured of their confidentiality.

Data analysis

The data generated from the study were sorted, organized and analyzed using both descriptive and inferential statistics. Spearman's rank correlation coefficient was used to determine the strength of the relationship between the independent variable (Pharmaceutical care services delivery) and the dependent variable (Business performance) of the study. The observed variables which were measured in quantitative (ordinal) scale made the data suitable for suitable correlation using the Spearman's rank correlation.

RESULTS AND ANALYSIS

Two set of questionnaires were distributed to patient respondents and superintendent community pharmacist respondents respectively. One thousand three hundred and eighty four (1,384) copies of well-structured patient respondent questionnaires and one hundred and seventy three (173) copies of the superintendent community pharmacist respondent questionnaires respectively were distributed. They were duly filled and returned. One thousand two hundred and sixty (1,260) copies of the patient respondent questionnaires were filled appropriately and returned representing 91% response rate. From the patient respondent questionnaires, 49.6% (625) of the respondents were males while 50.4% (635) were females. Also 24.9% of the respondents were between the ages of 18-25 years, 21.1% were between the ages of 26-30 years, 30.5% were between the ages of 31-40 years, while 23.5% were 40 years and above. 27.3% of respondents visited the pharmacy for Prescription Refill, 49.3% visited the Pharmacy for Drug Purchase, 5.0% went for Health Screening, 10.3% visited for Counselling/Drug enquiry, while 8.2% visited the pharmacy for other reasons.

Table 4.1: Demographic characteristics for the total patients' respondent (n =1260).

Demographics	n (%)
Gender	
Male	625 (49.6)
Female	635 (50.4)
Age bracket	
18-25	314 (24.9)
26-30	266 (21.1)
31-40	384 (30.5)
41-Above	296 (23.5)
Purpose of visit to pharmacy	
Prescription refill	344 (27.3)
Drug purchase	621 (49.3)
Health screening	63 (5.0)
Counselling/Drug enquiry	129 (10.3)
Others	103 (8.2)

Table 1: Showing patients responses to the evaluation of pharmaceutical care practice in community pharmacies in Rivers State. VLE: Very Low Extent, LE: Low Extent, ME: Moderate Extent, HE: High Extent, VHE: Very High Extent.

I	Received Pharmaceutical care	VLE	LE	ME	HE	VHE	Total
A	To what extent does the pharmacist provide you with information about drug therapy or disease?	33 (2.6%)	69 (5.6%)	407 (32.3%)	455 (36.1%)	296 (23.5%)	1,260
B	To what extent does the pharmacist provide you with information about the results you should expect from your medication?	19 (1.5%)	82 (6.5%)	325 (25.8%)	514 (40.8%)	320 (25.4)	1,260
C	To what extent does the pharmacist advice you on how to use your medication after being dispensed?	23 (1.8%)	48 (3.8%)	277 (22.0%)	503 (39.9%)	409 (32.5%)	1,260
D	To what extent does the pharmacist make enquiry about your previous medication(s)?	44 (3.5%)	92 (7.3%)	329 (26.1%)	499 (39.6%)	296 (23.5%)	1,260
E	To what extent does the pharmacist seek your opinion on choosing a suitable time to start your medication?	52 (4.1%)	103 (8.2%)	281 (22.3%)	510 (40.5%)	314 (24.9%)	1,260
F	To what extent does the pharmacist explain to your understanding the process and how to take your medication?	52 (4.1%)	37 (2.9%)	229 (18.2%)	462 (36.7%)	480 (38.1%)	1,260
G	To what extent does the pharmacist advice you on choice of diet with respect to your illness/health challenge?	84 (6.7%)	111 (8.8%)	329 (26.1%)	436 (34.6%)	300 (23.8%)	1,260
H	To what extent does the pharmacist assist you in medication brand selection to avoid unnecessary cost related to your prescription?	63 (5.0%)	144 (11.4%)	314 (24.9%)	443 (35.2%)	296 (23.5%)	1,260
I	To what extent does the pharmacist advice you on the proper storage of your medication?	85 (6.7%)	140 (11.1%)	277 (22%)	462 (36.7%)	296 (23.5%)	1,260
J	To what extent does the pharmacist identify and resolve perceived problem(s) emanating from the drugs you are taking?	63 (5.0%)	130 (10.3%)	325 (25.8%)	407 (32.3%)	335 (26.6%)	1,260
K	To what extent does the pharmacist reach out to you, to enquire about your health progress?	126 (10.0%)	126 (10.0%)	233 (18.5%)	503 (39.9%)	272 (21.6%)	1,260
L	To what extent does the pharmacist carry out a routine check-up, health screening or advice you on the need to visit the hospital/clinic for screening?	103 (8.2%)	115 (9.1%)	244 (19.4%)	484 (38.4%)	314 (24.9%)	1,260

Table 2: Showing the extent of patients' satisfaction with the pharmaceutical care practice offered by community pharmacists.

2	Patient Satisfaction	VLE	LE	ME	HE	VHE	
A	To what extent are you satisfied with the services rendered by the pharmacy?	52 (4.1%)	59 (4.7%)	285 (22.6%)	499 (39.6%)	365 (29.0%)	1260
B	To what extent would you rate the services provided by this pharmacy?	40 (3.2%)	44 (3.5%)	296 (23.5%)	524 (41.6%)	356 (28.2%)	1260
C	To what extent would you recommend this pharmacy to someone?	40 (3.2%)	82 (6.5%)	218 (17.3%)	454 (36%)	466 (37.0%)	1260
D	To what extent do you consider price of drugs and services as a determining factor for the pharmacy you patronize?	105 (8.3%)	55 (4.4%)	336 (26.7%)	435 (34.5%)	329 (26.1%)	1260
E	To what extent would you continue patronizing the pharmacy in spite of perceived price differences?	40 (3.2%)	63 (5.0%)	245 (19.4%)	476 (37.8%)	436 (34.6%)	1260

Table 3: Showing respondent Pharmacist's demographics. (n = 173).

Demographics	n (%)
Gender	
Male	75 (43.4)
Female	98 (56.6)
Age bracket	
18-25	19 (11.0)
26-30	70 (40.5)
31-40	45 (26.0)
41-Above	39 (22.5)
Marital status	
Single	79 (45.7)
Married	94 (54.3)
Educational qualification	
B.Pharm	147 (85.0)
Pharm.D	11 (6.4)
M.Pharm/MSc	13 (7.5)
Ph.D	2 (1.1)

A total of one hundred and seventy-three (173) pharmacist partook in this exercise. The retrieved questionnaires showed that 75 (43.4%) male community pharmacists and 98 (56.6%) female community pharmacists participated in the research study. 11.0% of respondents were between the ages of 18-25 years, 40.5% were between the ages of 26-30 years, 26.0% were within the age range of 31-40 years while the

remaining 22.5% were within the ages of 40 years and above. Among the Pharmacists respondents, 45.7% were single and the remaining 54.3% were married. None of them was divorced. The educational qualification of the Pharmacists is as follows; 85% of the respondents had B.Pharm, 6.4% had Pharm.D, 7.5% had Masters and 1.1% of the respondents possessed Ph.D.

Table 4: Showing the evaluation of sales turnover of respondent community pharmacists.

2	Sales Turnover	VLE	LE	ME	HE	VHE	Total
A	To what extent do you think your pharmacy meets its annual sales target?	0 (0%)	17 (9.8%)	55 (31.8%)	92 (53.2%)	9 (5.2%)	173
B	To what extent do you think pharmaceutical care-oriented practice has impacted on your sales turnover?	0 (0%)	7 (4.0%)	31 (17.9)	97 (56.1%)	38 (22.0%)	173
C	To what extent do you think customers' satisfaction has impacted on your sales turnover?	0 (0%)	0 (0%)	16 (9.2%)	95 (54.9%)	62 (35.8%)	173
D	To what extent do you think the sales turnover of your pharmacy has increased progressively within the last 2 years?	3 (1.7%)	7 (4.0%)	43 (24.9%)	81 (46.8%)	40 (23.1%)	173
E	To what extent do you consider turnover as an essential tool in measuring your pharmacy's growth?	0 (0%)	0 (0%)	31 (17.9%)	83 (48.0%)	58 (33.5%)	173

From the table above, it was observed that 5.2% of the pharmacies believed they met their annual sales target to a very high extent, while 5.2%, 53.2%, 31.8% and 9.8%

believed they met theirs to a high extent, moderate extent, low extent and very low extent respectively. None (0%) of the pharmacies said they met their annual

sales target to a very low extent. To the extent the pharmacists thought pharmaceutical care-oriented practice had impacted on their sales turnover, 22.0% thought it was to a very high extent, 56.1% thought it was to a high extent, 17.9% thought it was to a moderate extent and 4.0% thought it was to a low extent. None (0%) of the pharmacies thought pharmaceutical care-oriented practice had impacted on their sales turnover to a very low extent. To the extent the pharmacies thought customers' satisfaction had impacted on their sales turnover, 35.8% of the respondents thought it was to a very high extent, 54.9% and 9.2% of respondents thought it was to a high extent and moderate extent respectively

while none (0%) of the pharmacies thought it was to a low or very low extent.

To the extent the respondents thought the sales turnover of their pharmacy had increased progressively within the last 2 years, 23.1% affirmed it was to a very high extent, while 46.8%, 24.9%, 4.0% and 1.7% thought it was to a high extent, moderate extent, low extent and very low extent respectively. To the extent the respondents considered turnover as an essential tool in measuring their pharmacy's growth, 33.5% considered turnover to a very high extent, 48.0% and 17.9% considered turnover to high and moderate extent, while none considered turnover to a low or very low extent.

Table 5: Showing the evaluation of respondent community Pharmacists' profitability.

	PROFITABILITY	VLE	LE	ME	HE	VHE	Total
A	To what extent do you think your pharmacy has profited from pharmaceutical care-based practice?	0 (0%)	4 (2.3%)	32 (18.5%)	72 (41.6%)	65 (37.6%)	173
B	To what extent do you think that your pharmacy's gross profit has increased progressively over the last two years?	0 (0%)	9 (5.2%)	42 (24.3%)	89 (51.4%)	33 (19.1%)	173
C	To what extent do you think pharmaceutical care-based practice has made your pharmacy profitably stand out among other competitors?	2 (1.2%)	4 (2.3%)	29 (16.8%)	70 (40.5%)	67 (38.7%)	173
D	To what extent do you think pharmaceutical care-based practice has influenced positively your pharmacy's image with respect to customer's perception, which reflects on profitability?	3 (1.7%)	0 (0%)	18 (10.4%)	85 (49.1%)	67 (38.7%)	173

From the table above, 37.6% of respondents thought they had benefitted to a very high extent from pharmaceutical care-based practice, while 41.6%, 18.5%, and 2.3% of respondents thought it was to a high extent, moderate extent and low extent respectively. None thought it was to a very low extent. Respondents thought that their pharmacy's gross profit had increased progressively over the last two years, 19.1% thought it had increased to a very high extent, 51.4%, 24.3% and 5.2% thought it was to a high, moderate and low extent respectively, while none thought it was to a very low extent. To the extent respondents thought pharmaceutical care-based practice had made their pharmacy profitably stand out among other competitors, 38.7% concurred to a very high

extent, while 40.5%, 16.8%, 2.3% and 1.2% said it was to a high extent, moderate extent, low extent and very low extent respectively.

With respect to how pharmaceutical care-based practice has influenced positively their pharmacy's image with respect to customer's perception, which reflects on profitability, 38.7% of the respondents felt pharmaceutical care-based practice had positively influenced their pharmacy's image to a very high extent while 49.1%, 10.4%, 0% and 1.7% thought this to a high extent, moderate extent, low extent and very low extent respectively.

Table 6: Showing the correlation between pharmaceutical care practice and customers' satisfaction at community pharmacies in Port Harcourt, Rivers State.

Pharmaceutical care services	Correlation between pharmaceutical care practice and customers' satisfaction	
Patient Education and Counselling	Correlation coefficient (r)	0.9532
	Sig. (2-tailed)	0.0012
Ethical dispensing practice	Correlation coefficient (r)	0.9999
	Sig. (2-tailed)	<0.0001
Medication Therapy Management	Correlation coefficient (r)	0.9702
	Sig. (2-tailed)	0.0062
	Sig. (2-tailed)	0.0060
Patient follow-up	Correlation coefficient (r)	0.9137
	Sig. (2-tailed)	0.0301
Routine check-up and Patient's screening	Correlation coefficient (r)	0.9680
	Sig. (2-tailed)	0.0068

N/B: **Correlation is significant at a 0.05 level (2-tailed)

Table 7: Showing the correlation between pharmaceutical care practice and sales turnover of community pharmacies in Port Harcourt, Rivers State.

Pharmaceutical care services	Impact of pharmaceutical care services on sales turnover of community pharmacies	
Patient Education and Counselling	Correlation coefficient (r)	0.9532
	Sig. (2-tailed)	0.0176
Ethical dispensing practice	Correlation coefficient (r)	0.9386
	Sig. (2-tailed)	0.0181
Medication Therapy Management	Correlation coefficient (r)	0.9717
	Sig. (2-tailed)	0.0057
	Sig. (2-tailed)	0.0639
Patient follow-up	Correlation coefficient (r)	0.9940
	Sig. (2-tailed)	0.0006
Routine check-up and Patient's screening	Correlation coefficient (r)	0.9929
	Sig. (2-tailed)	0.0007

Table 8: Showing the correlation between Pharmaceutical Care Practice and Profitability of Community Pharmacies in Rivers State.

Pharmaceutical care services	Impact of pharmaceutical care services on profitability of community pharmacies	
Patient Education and Counselling	Correlation coefficient (r)	0.9156
	Sig. (2-tailed)	0.026
Ethical dispensing practice	Correlation coefficient (r)	0.9883
	Sig. (2-tailed)	0.0015
Medication Therapy Management	Correlation coefficient (r)	0.9527
	Sig. (2-tailed)	0.0123
	Sig. (2-tailed)	0.0072
Patient follow-up	Correlation coefficient (r)	0.9455
	Sig. (2-tailed)	0.0151
Routine check-up and Patient's screening	Correlation coefficient (r)	0.9846
	Sig. (2-tailed)	0.0023

DISCUSSION OF FINDINGS

The findings of the study show that most community pharmacies rendered pharmaceutical care services as majority of the patient respondents (87.2%) affirmed to receiving pharmaceutical care services to varying extents. The results show that a high percentage of patient/customer respondents are in agreement with the delivery of different pharmaceutical care services as shown in responses to the structured questions which range from moderate to a very high extent. This is an indication that community Pharmacists in Port Harcourt, Nigeria have already embraced the concept of pharmaceutical care as a driving tool or resource for business growth. Just like Peterson *et al* (2003) are of the view that organizational performance centralizes on the 'capacity and ability' of an organization to utilize available resources efficiently and economically to achieve results as well as outcomes consistent with the set aim of the organization, also considering their relevance to users generally.

Also, considering the response obtained from customer/patient respondents with respect to their level of satisfaction with pharmaceutical care services received at the respective community pharmacies involved in the research, the following results were obtained: for the extent the customers were satisfied with

the services delivered by the community pharmacies, 29.0% (365) of the respondents said they were satisfied to a very high extent, while 39.6% (499), 22.6% (285), 4.7% (59) and 4.1% (52) said they were satisfied to a high extent, moderate extent, low extent and very low extent respectively.

For the extent to which the patients rated the services delivered by community pharmacies, 28.2% (356) of respondents rated them to a very extent, while 41.6% (524), 23.5% (296), 3.5% (44) and 3.2% (40) rated the services to a high extent, moderate extent, low extent and very low extent respectively.

For the extent to which the customers would recommend the pharmacy to someone, 37.0% (466) of respondents said they would do this to a very high extent, while 36% (454), 17.3% (218), 6.5% (82) and 3.2% (40) said they would do this to a high extent, moderate extent, low extent and very low extent respectively.

For the extent to which the customers considered price of drugs and services as a determining factor for pharmacies they get their drugs from, 26.1% (329) of the respondents said they would likely do this to a very high extent, while 34.5% (435), 26.7% (366), 4.4% (55) and 2.3% (29) said they will do this to a high extent,

moderate extent, low extent and very low extent respectively.

From the above results, a high number of customers on average showed high level of satisfaction. As stated by Iftighar *et al* (2011), Customers' satisfaction defines the extent as well as level of positivity shown by the patient, having used or received a given service. It also tells the extent at which a patient's expectations over a service are actualized. This in turn reflects on the business performance of the community pharmacy, just as described by Fornell *et al* (1996) that one of the strategic goals of an organization is to improve customers' satisfaction and consequently gain more loyal customers which in turn reflect in its financial return. It can be observed that the correlation coefficient between patient education/counselling services and customers' satisfaction; extrapolated from the extent community pharmacists provided information about drug therapy or disease is +0.9260. This indicates a strong positive correlation that is significant at $p < 0.05$. Same is applicable to the following correlations: the correlation coefficient between the extent of medication therapy management and customers' satisfaction; extrapolated from the extent pharmacists provided information about the results expected from patients' medication is +0.9889, which is a very strong correlation that is significant ($p < 0.05$). The correlation coefficient between the extent of medication therapy management and customers' satisfaction; extrapolated from the extent pharmacists advised on how to use/take and store medication after dispensing which is +0.9719 ($p < 0.05$), the correlation coefficient between the extent of medication therapy management and customers' satisfaction; extrapolated from the extent pharmacists enquiry about patients' previous medication(s) which is +0.9808 ($p < 0.05$), the correlation coefficient between the extent of medication therapy management and customers' satisfaction; extrapolated from the extent the pharmacist sought patients' opinion on choosing a suitable time to start medication which is +0.9717 ($p < 0.05$), the correlation coefficient between the extent of patient education/counselling and customers' satisfaction; extrapolated from the extent the pharmacists advised customers on choice of diet with respect to illness/health challenge which is +0.9609 ($p < 0.05$), the correlation coefficient between the extent medication therapy management and customers' satisfaction; extrapolated from the extent the pharmacists assisted in patients' medication brand selection to avoid unnecessary cost associated with prescription which is +0.9535 ($p < 0.05$), the correlation coefficient between the extent of medication therapy management and customers' satisfaction; extrapolated from the extent the pharmacists advised customers on the proper storage of medication is +0.9635 ($p < 0.05$), the correlation coefficient between the extent of medication therapy management and customers' satisfaction; extrapolated from the extent the pharmacist identified and resolved perceived problem(s) emanating from the drugs patients

were taking which is +0.9708 ($p < 0.05$), the correlation coefficient between the extent of patient/customer follow-up and customers' satisfaction is +0.9137 ($p < 0.05$), the correlation coefficient between the extent of customer/patient routine check-up/health screening exercise carried out by the pharmacists and customers' satisfaction is +0.9680 ($p < 0.05$). These agree with Kassam *et al* (2012) research on patient satisfaction with pharmaceutical care delivery in community pharmacies, involving 628 patients from 55 pharmacies with the British Columbia, of which the outcome of the survey has it that: introduction of pharmaceutical care service in pharmacies improved patients' satisfaction.

Results obtained for sales turnover as provided by community pharmacists respondents showed that 5.2% (9) of the community pharmacists believed they met their annual sales target to a very high extent, while, 53.2% (92), 31.8% (55) and 9.8% (17) believed they met theirs to a high extent, moderate extent, low extent and very low extent respectively. None (0%) of the pharmacists said they met their annual sales target to a very low extent.

For the extent to which community Pharmacist respondents thought pharmaceutical care-oriented practice had impacted on their sales turnover, 22.0% (38) thought it was to a very high extent, 56.1% (97) thought it was to a high extent, 17.9% (31) thought it was to a moderate extent and 4.0% (7) thought it was to a low extent. None (0%) of the pharmacies thought pharmaceutical care-oriented practice had impacted on their sales turnover to a very low extent.

For the extent to which the community pharmacist respondents thought customers' satisfaction had impacted on their sales turnover, 35.8% (62) of the pharmacist respondents thought it was to a very high extent, 54.9% (95) and 9.2% (16) of respondents thought it was to a high extent and moderate extent respectively while none (0%) of the pharmacies thought it was to a low or very low extent.

For the extent to which the pharmacist respondents thought the sales turnover of their pharmacy had increased progressively within the last 2 years, 23.1% (40) affirmed it was to a very high extent, while 46.8% (81), 24.9% (43), 4.0% (7) and 1.7% (3) thought it was to a high extent, moderate extent, low extent and very low extent respectively.

For the extent to which the pharmacist respondents considered turnover as an essential tool in measuring their pharmacy's growth, 33.5% (58) considered turnover to a very high extent, 48.0% (83) and 17.9% (31) considered turnover to high and moderate extent, while none considered turnover to a low or very low extent. As observed with the correlations, the correlation coefficient between the extent of patient education/counselling and sales turnover of community

pharmacies is +0.9532. This indicates a strong positive correlation. Same is applicable to the following correlations: the correlation coefficient between the extent of ethical dispensing practice and sales turnover of community pharmacies is +0.9386, the correlation coefficient between the extent of medication therapy management and sales turnover of community pharmacies is +0.9717, the correlation coefficient between the extent of patient follow-up and sales turnover of community pharmacies is +0.9940, the correlation coefficient between the extent of patient routine check-up/health screening and sales turnover of community pharmacies which is +0.9927.

These results establish a strong correlation between pharmaceutical care service delivery and sales turnover which is an essential tool for measuring pharmacy financial growth or performance. This result shows that pharmaceutical care-based practices had impacted positively on their sales turnover. This is in line with Negar (2009) statement; that achieving a given sales turnover by a business establishment portrays a level of acceptability of the establishment's products or services, as product users whose purchases are repeated contribute to the profitability of a business venture. This result is also in line with the outcome of a research by Strand *et al* (2004) on the impact of pharmaceutical care practice on the practitioner and the patient in the Ambulatory practice setting. The study showed that practitioners saw four times more patients than they had seen before the introduction of pharmaceutical care-based practice.

Considering the results obtained for the extent pharmacist respondents think their pharmacy has profited from pharmaceutical care-based practices, 37.6% (65) of respondents thought they had benefitted to a very high extent, while 41.6% (72), 18.5% (32), and 2.3% (4) of respondents thought it was to a high extent, moderate extent and low extent respectively. None thought it was to a very low extent.

For the extent to which pharmacist respondents thought that their pharmacies' gross profit had increased progressively over the last two years, 19.1% (33) thought it had increased to a very high extent, 51.4% (89), 24.3% (42) and 5.2% (9) thought it was to a high, moderate and low extent respectively, while none thought it was to a very low extent.

For the extent to which pharmacist respondents thought pharmaceutical care-based practice had made their pharmacy profitably stand out among other competitors, 38.7% (67) concurred to a very high extent, while 40.5% (70), 16.8% (29), 2.3% (4) and 1.2% (2) said it was to a high extent, moderate extent, low extent and very low extent respectively.

For the extent to which pharmacist respondents thought pharmaceutical care-based practice had positively influenced their pharmacy's image with respect to

customer's perception, which reflects on profitability, 38.7% (67) of the respondents felt pharmaceutical care-based practice had positively influenced their pharmacy's image to a very high extent while 49.1% (85), 10.4% (18), 0% (0.0) and 1.7% (3) thought this to a high extent, moderate extent, low extent and very low extent respectively.

The correlation coefficient between the extent of patient education/counselling and profitability of community pharmacies is +0.9156 which is significant at $p < 0.05$. This indicates a strong positive correlation. Same is applicable to the following correlations: the correlation coefficient between the extent of ethical dispensing practice and profitability of community pharmacies which is +0.9883, the correlation coefficient between medication therapy management services delivery and profitability of community pharmacies is +0.9527 ($p < 0.05$), the correlation coefficient between the delivery of patient follow-up services and profitability of community pharmacies is +0.9455 ($p < 0.05$), the correlation coefficient between patient routine check-up/health screening services delivery and profitability of community pharmacies is +0.9846 at $p < 0.05$.

The outcome of the study shows that there is a very strong and positive relationship between the indicators of pharmaceutical care services delivery and the profitability of community pharmacies in Port Harcourt, Rivers State, Nigeria. This validates the research carried out by Hong *et al* (2005) on patient valuation of pharmacist services for self-care with Over the Counter (OTC) medications, whose result showed that more than twice as many patients were willing to pay for pharmacist services for patient self-care than a decade ago which implies increased profitability.

CONCLUSION

From the findings of this study, it can be concluded that the delivery of pharmaceutical care services by community pharmacies greatly improves the business performance of community pharmacies in Port Harcourt, Nigeria since all the indicators of the predictor variable – pharmaceutical care services delivery positively and strongly correlates with all the measures of business performance using the balanced score-card approach for the study.

REFERENCES

1. Berenguer, B., La Casa C., de la Matta, M.J. & Martin-Calero, M.J. Pharmaceutical care: Past, present and future. *Current pharmaceutical design*, 2004; 10(31): 3931-3946.
2. Chandler, G.N. and Hanks, S.H. Measuring the performance of emerging business: a validation study. *Journal of Business Venturing*, 1993; 8(5): 391-408.
3. Cherington, D.J. *Organizational behaviour: The management of individual and organizational performance*. Allyn & Bacon, 1989.

4. Doucette, W.R., McDonough, R.P., Mormann, M. M., Vaschevici, R., Urmie, J.M., & Patterson, B. J. Three-year financial analysis of pharmacy services at an independent community pharmacy. *Journal of American Pharm. Assoc.*, 2012; 52: 181-187.
5. Edvardsson, B. 'Service quality improvement, managing service quality: An International Journal, 1998; 8: 142-149.
6. Erah, Patrick O. The changing roles of pharmacists in hospital and community pharmacy practice in Nigeria. *Tropical journal of pharmaceutical research*, 2003; 2(2): 195-196.
7. Fornell, C., Johnson, M. D., Anderson, E.W., Cha, J. & Everitt Bryant, B. The American customer satisfaction index: Nature, purpose and findings. *Journal of Marketing*, 1996; 60: 7-18.
8. Gimbert, X., Bisbe, J. and Mendoza, X. 'The role of performance measurement systems in strategy formulation processes. *Long Range Planning*, 2010; 43(4): 477-497.
9. Helper, D.D and Strand, L.M. Opportunities and Responsibilities in pharmaceutical care. *American Journal of Pharm. Education*, 1989; 53: 75-155.
10. Hong, S. H., Spadaro, D., West, D., & Tak, S. H. Patient valuation of pharmacist services for self-care with OTC medication. *Journal of Clinical pharmacy and Therapeutics*, 2005; 30(3): 193-199.
11. Iftighar, A., Allahe, N., Shadiullah, K., mabibullah, K., Muhammed, A. Predictors of patient satisfaction. *Gomal Journal of Medical Sciences*, 2011; 9: 183-8.
12. Kassam, R., Collins, J. B., & Berkowitz, J. Patient satisfaction with pharmaceutical care delivery in community pharmacies. Patient preference and Adherence. *Dove Press Journal*, 2012; 6: 337-48.
13. Mason Pamela. Pharmaceutical care: The German experience. *The Pharm. Journal*, 2001; 266(7132): 122-123.
14. Negar, K. Evaluating the effect of consumer sales on brand loyal and brand switching segments. *VISSION-J Business Perspective*, 2009; 13(4): 32-48.
15. Ogbonna, B.O., Ilika, A. L., & Nwabueze, S.A. National Drug Policy in Nigeria, 1985-2015. *World Journal of Pharmaceutical Research*, 2015; 4(6): 248-264
16. Peterson, W., Gijbsbers, G., & Wilks, M. *An organizational performance assessment system for agricultural research organizations: Concepts, methods, and procedures*. The Hague: International service for National Agricultural Research, 2003.
17. Prieto, I.M. & Revilla, E. Learning Capability and Business Performance: A Non-Financial and Financial Assessment. *The Learning Organization*, 2006; 13: 166-185.
18. Robert, J.C., Linda, M.S., & Peter, C.M. *Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management Services*. 3rd ed. McGraw-Hill Education / Medical, 2012.
19. Strand, L. M., Cipolle, R. J., Morley, P. C., & Frakes, M, J. The impact of pharmaceutical care practice on the practitioner and the patient in the Ambulatory practice setting: Twenty-five years of experience. *Current Pharmaceutical Design*, 2004; 10(31): 3987-4001.
20. Vermeulen, L., Rough, S., Thielke, T. S., & Shane, R. Strategic approach for improving the medication-use process in health systems: The high-performance pharmacy practice framework. *American journal of health-system pharmacy*, 2007; 64(16): 1699-710.
21. Wilson, A. Attitudes towards customer satisfaction measurement in the retail sector. *International Journal of Market Research*, 2002; 44(2): 213-22.