IOSR Journal Of Pharmacy
(e)-ISSN: 2250-3013, (p)-ISSN: 2319-4219
www.iosrphr.org Volume 4, Issue 11 (November 2014), PP. 10-16

Attitude of Pharmacists to the Pharmaceutical care concept in rivers and bayelsa states of Southern Nigeria

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ABSTRACT: *Pharmaceutical care education was introduced into the country about a decade ago. There is a need to assess the impact of the education and information on the attitude of practicing pharmacists from time to time. Hence, an original research work was undertaken to evaluate the current attitudes towards Pharmaceutical Care (PC) concept and it's implementation that are prevalent amongst practicing pharmacists and also to examine the impact of demographic factors. A descriptive study was carried out with a questionnaire between the months of January and March, 2013 among 205 out of estimated 400 pharmacists practicing in Rivers and Bayelsa States of Nigeria. Data collected was subjected to descriptive statistical analysis using SPSS version 15. Over 82% strongly agreed that pharmaceutical care was relevant to their practice while 62% are willing to incorporate Pharmaceutical care in their current practice. Most young pharmacists as well as pharmacists in hospital and community practice strongly agreed on the relevance of Pharmaceutical care and indicated willingness to implement the practice.The attitude of Pharmacist in these two states towards the Pharmaceutical Care concept and it's implementation is good. However, there are challenges that need to be overcome to facilitate proper implementation of the concept.*

KEY WORDS- *Current Attitude, Pharmaceutical Care Concept, Willing to Incorporate.*

I. INTRODUTION

Pharmaceutical Care has been accepted by FIP (International Pharmaceutical Federation) as the mission for the pharmacy profession. Pharmaceutical Care was defined as ''The responsible provision of drug therapy needs for the purpose of achieving definite outcomes that improves a patient's quality of life"(1-2). FIP modified it to state that "Pharmaceutical care is the responsible provision of drug therapy needs for the purpose of achieving definite outcomes that improves or maintain a patient's quality of life''(3). The reason for this modification is to accommodate chronic irreversible disease conditions for pharmaceutical care services. The World Health Organization defined Pharmaceutical Care as " A patient care system that continually observes the short term results of the therapy in progress and helps to make corrections to improve management outcomes WHO, (4). Many countries have modified definition of Pharmaceutical Care to suit their culture or pharmacy practice pattern. Mill(5) requested for the definition of pharmaceutical care from thirty countries. Only six gave the Hepler and Strand's (1-2) definition which is accepted internationally, twelve countries gave their own definition while twelve countries had no definition. Different definitions would mean differing attitudes. Attitude would affect implementation and the quality of practice. Hence, the need to evaluate the attitude of practicing pharmacists in different settings.

II. METHODS

The study was a prospective multi-centered study that involved facilities that involved three tertiary health facilities (Federal Medical Center, Yenagoa; Niger Delta University Teaching Hospital; and University of Port Harcourt Teaching Hospital) , and two schools of pharmacy (Niger Delta University, Amasoma and University of Port Harcourt).Pharmacists were targeted at various pharmaceutical society and technical meetings in both states. The purpose of the research was explained to the pharmacists in other to obtain their consent. Participation was voluntary. A self-administered questionnaire was distributed to willing participants irrespective of their practice group. The questionnaire was structured to retrieve demographic and attitude revealing data. Two hundred and sixty-five questionnaires were sent out. Two hundred and five questionnaires were retrieved completely filled. Statistical package for Social Sciences (SPSS) was used to analyze the data. Descriptive data was derived. Response to questions was computed numerically and in percentages. Chi square tests were performed to observe the relationship between demographics and attributes of attitude. At 95% confidence interval, a 2-tailed p-value less than 0.05 was considered significant.

III. RESULTS

Out of two hundred and sixty questionnaires distributed two hundred and five were completed and retrieved giving a response rate of 78.8%.

DEMOGRAPHICS

There were more male pharmacists 60.5% while female pharmacists were 39.5% were female. Majority (88.7%) of respondents were less than 50years of age. Majority (62.4%) are married. Most (73.2%) of the respondents were licensed within the last 20years with half (49.6%) in the last 10 years .Sixty-two (62%) percent have maintained their current practice for ten years. Majority 69.8% had been aware of Pharmaceutical Care concept for up to 10 years. Almost 70% of respondents holds the bachelor's degree and over seventy percent have not specialized in any particular field. The dominant practice groups are community pharmacists in retail(34.6%) and hospital/administrative pharmacists in tertiary institutions (27.3%). Over eighty percent of respondents practice in the urban area. Details in Tables 1a,b.

TABLE 1a--DEMOGRAPHIC DATA; n=205

VARIABLES	VALUES	FREQUENCY	PERCENTAGE
Sex	M	124	60.5
	F	81	39.5
Marital	Single	73	35.6
Status	Married	128	62.4
	Widowed	3	1.5
	No Response	1	0.5
Age	< 30	56	27.3
Group	31-40	72	35.1
	41-50	54	26.3
	51-60	20	9.8
	61-70	1	0.5
	> 70	2	1.0
Years of Post-Licensing	< 10	102	49.8
Experience	11-20	48	23.4
	21-30	36	17.6
	31-40	6	2.9
	41-50	2	1.0
	No Response	11	5.4
Years Spent in Current	< 5	85	41.5
Practice	6-10	42	20.5
	11-15	20	9.8
	16-20	11	5.4
	21-25	9	4.4
	26-30	11	5.4
	31-35	5	2.4
	No Response	22	10.6
Years **of Awareness of PC**	0-5	84	41
Concept	6-10	59	28.8
	11-15	24	11.5
	> 15	5	2.5
	No response	33	16.1

TABLE 1b--DEMOGRAPHIC DATA;n=205

		Frequency	Percentage
Practice Group	NAHAP – Ministry	15	7.3
	NAHAP – 3^{O} Care	56	27.3
	NAHAP – 2^{O} Care	7	3.4
	NAHAP – Anonymous	1	0.5
	NAPA – Teaching	22	10.7
	NAPA – Consultancy	1	0.5
	ACPN – Wholesale	15	7.3
	ACPN – Retail	71	34.6
	ACPN – Int. Trade	4	2
	NAIP – Marketing	2	1
	NAIP – Int. Trade	1	0.5
	No Response	10	4.9
Qualification	B. Pharm/B. Sc	141	68.8
	Pharm. D	21	10.2
	M.Sc. Pharm.	13	6.3
	M. Pharm.	4	2.0
	FPC Pharm.	8	3.9
	Ph.D	7	3.4
	MBA	6	2.9
	MPH	3	1.5
	No Response	2	1
Specialization (Specialty)	Public Health	8	3.9
	Pharm. Tech.	5	2.4
	Clinical Pharmacy	19	9.3
	Pharm. Chem.	2	1.0
	Pharm. Micro	1	0.5
	Pharmacology	4	2.0
	Pharmacognosy	3	1.5
	No Response	163	79.5
Practice Location	State Capital	167	81.5
	LGA Headquarters Others	12	5.9
	No Response	14	6.8
		12	5.9

CURRENT ATTITUDE OF PHARMACISTS TO PHARMACEUTICAL CARE

Over 82% strongly agreed that pharmaceutical care was relevant to their practice.Similarly,84.4% identified Pharmaceutical care as part of their practice. Also, 62% are willing to incorporate Pharmaceutical care in their current practice. However, only 19% claimed that they would implement Pharmaceutical care in their practice within six months and 16.6% requested for more time. The rest of the respondents did not commit themselves to a time frame for implementation. 40% of the respondents indicated reasons for not implementing Pharmaceutical care into their practice. Out of the 40%, 13.7% cited lack of skills 5.9% cited time limitation while 9.8% said it was not relevant.

Respondents age and practice group strongly affect their attitude. Younger pharmacists strongly agree that Pharmaceutical Care is relevant. While pharmacists in hospital and community practice strongly agreed to the relevance of Pharmaceutical care and indicated willingness to implement the practice.

TABLE 2- PERCENTAGE LEVEL OF AGREEMENT OF STATEMENTS RELATING TO RELEVANCE OF PC IMPLEMENTATION

n=205

Statement	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	No Response
I consider PC to be relevant to my practice.	82.9	10.2	2.0	1.5	1	2.4
PC is part of my current practice.	51.7	32.7	6.3	4.9	1	3.4
I am willing to incorporate PC into my current practice.	62	22.9	2.4	2.4	-	10.2

TABLE 3- PERCENTAGE OF RESPONDENTS GIVING REASONS FOR NOT CURRENTLY PRACTICING PHARMACEUTICAL CARE.

n=205

Reasons Giving	No. of Respondents	Percentage
PC is not Relevant	20	9.8
PC is not Profitable	2	1
Time Limitation	12	5.9
Space Limitation	5	2.4
Cost Limitation	4	2
Skills are Needed	28	13.7%
'Other reasons'	12	5.9
No Response	122	59.9%

TABLE 4-CROSS TABULATION OF DEMOGRAPHIC DATA OF RESPONDENTS VERSUS RESPONSE TO ATTRIBUTES OF ATTITUDE .;n=205:n(%).

I CONSIDER PHARMACEUTICAL CARE(PC) TO BE RELEVANT TO MY PRACTICE

	Strongly agree, n (%)	Agree n (%)	Undecided n (%)	Disagree n (%)	Strongly disagree n (%)	No response n (%)	Total n (%)	X^2	df	P-value
Sex: M	102(82.3)	12(9.7)	3(2.4)	3(2.4)	2(1.6)	2(1.6)	124(100.0)	4.6	5	0.465
F	68(84.0)	9 (11.1)	1 (1.2)	0 (0)	0 (0)	3 (3.7)	81 (100.0)			
Age;<30	52(92.9)	2 (3.6)	0(0)	1(1.8)	0 (0)	1(1.8)	56(100.0)	43.4	25	0.013*
31-40	58(80.6)	8(11.1)	3(4.2)	2(2.8)	0 (0)	1(1.4)	72(100.0)			
41-50	44(81.5)	7(13.0)	1(1.9)	0 (0)	1(1.9)	1(1.9)	54(100.0)			
51-60	15(75.0)	3(15.0)	0 (0)	0 (0)	1(5.0)	1(5.0)	20(100.0)			
61-70	0 (0)	1(100.0)	0 (0)	0 (0)	0 (0)	0 (0)	1(100.0)			
>70	1(50.0)	0 (0)	0 (0)	0 (0)	0 (0)	1(50.0)	2(100.0)			
Pr.Group										
NAHAP	70(88.6)	6(7.6)	1(1.3)	0 (0)	0 (0)	2(2.5)	79(100.0)	37.8	25	0.048*
NAPA	12(52.2)	4(17.4)	3(13.0)	2(8.7)	1(4.3)	1(4.3)	23(100.0)			
ACPN	73(83.0)	11(12.5)	0 (0)	1(1.1)	1(1.1)	2 (2.3)	88(100.0)			
NAIP	3(100.0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (100.0)			
NAHAP										
Ministry	13(86.7)	2(13.3)	0 (0)	0 (0)	0 (0)	0 (0)	15(100.0)	10.3	15	0.800
Tertiary	51(91.1)	3(5.4)	0 (0)	0 (0)	0 (0)	2(3.6)	56(100.0)			
Secondary	7(100.0)	0(0)	0(0)	0 (0)	0 (0)	0 (0)	7 (100.0)			
ACPN										
Wholesale	13(86.7)	1(6.7)	0 (0)	1(6.7)	0 (0)	0 (0)	15(100.0)	9.7	15	0.8
Retail	59(83.1)	9(12.7)	0 (0)	0 (0)	1(1.4)	2 (2.8)	71(100.0)			
Int. Trade	3 (75.0)	1 (25.0)	0 (0)	0 (0)	0 (0)	0 (0)	4(100.0)			

Respondents age and practice group are significantly (p=0.013,p=0.048) affect their response. NAHAP, ACPN and ages<30-60 strongly consider PC to be relevant to their practice showing a positive attitude. The younger the respondents the more positive response observed.

TABLE 5-- I AM WILLING TO INCORPORATE PHARMACEUTICAL CARE (PC) INTO MY CURRENT PRACTICE.;n=205;n(%).

	Strongly agree, n (%)	Agree n (%)	Undecided n (%)	Disagree n (%)	Strongly disagree n (%)	No response n (%)	Total n (%)	X^2	df	P-value
Sex;M	75(60.5)	28(22.6)	3(2.4)	5(4.0)	0 (0)	13(10.5)	124(100.0)	3.41	4	0.492
F	52(64.2)	19(23.9)	2(2.5)	0 (0)	0 (0)	8(9.9)	81(100.0)			
Age;<30	39(69.6)	11(19.6)	2(3.6)	0 (0)	0 (0)	4(7.1)	56(100.0)	23.1	20	0.283
31-40	51(70.8)	12(16.7)	2(2.8)	3(4.2)	0 (0)	4(5.6)	72(100.0)			
41-50	26(48.1)	18(33.3	0 (0)	2(3.7)	0 (0)	8(14.8)	54(100.0)			
51-60	9 (45.0)	6 (30.0)	1(5.0)	0 (0)	0 (0)	4(20.0)	20(100.0)			
61-70	1(100.0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100.0)			
>70	1(50.0)	0 (0)	0 (0)	0 (0)	0 (0)	1(50.0)	2 (100.0)			
Pr.Group										
NAHAP	54(68.4)	16(20.3)	2(2.5)	0 (0)	0 (0)	7(8.9)	79(100.0)	35.4	20	0.018*
NAPA	10(43.5)	4 (17.4)	1(4.3)	4 (17.4)	0 (0)	4 (17.4)	23(100.0)			
ACPN	54(61.4)	22(25.0)	2(2.3)	1(1.1)	0 (0)	9 (10.2)	88(100.0)			
NAIP	1(33.3)	2 (66.6)	0 (0)	0 (0)	0 (0)	0 (0)	3(100.0)			
NAHAP										
Ministry	11(73.3)	4 (26.7)	0 (0)	0 (0)	0 (0)	0 (0)	15(100.0)	8.7	12	0.73
Tertiary	38(67.9)	10(17.9)	1(1.8)	0 (0)	0 (0)	7(12.5)	56(100.0)			
Secondary	5 (71.4)	2(28.6)	0 (0)	0 (0)	0 (0)	0 (0)	7 (100.0)			
ACPN										
Wholesale	10(66.7)	3(20.0)	1(6.7)	1(6.7)	0 (0)	0 (0)	15(100.0)	8.3	12	0.760
Retail	43(60.6%)	19(26.8)	1(1.4)	0 (0)	0 (0)	8 (11.3)	71(100.0)			
Int.Trade	2 (50.0)	1(25.0)	0 (0)	0 (0)	0 (0)	1(25.0)	4 (100.0)			

Respondents practice group significantly (P=0.018) affect their willingness to incorporate PC into their current practice. NAHAP and ACPN are positively willing to incorporate PC into their practice more than other groups showing significant association between respondents' practice group and his/her to PC practice and implementation.

IV. DISCUSSION

The trend of more male than female respondents was observed in other reports (6-8). The high proportion of Pharmacist younger than 50years of age was corroborated(8) and such is indicative of an active work force. About two-third of respondents (68.8%) were bachelor degree holders (B.Pharm) which is the pre requisite needed to practice pharmacy in Nigeria. Some additional degrees which some pharmacists possess include Pharm. D (10.2%),M.Sc Pharmacy (6.3%), FPC Pharm (3.9%), and Ph.D (3.4%). The high percentage of first degree holders means that intervention programs will yield positive results since this category of pharmacists are yet to specialize in any area. Intervention programs will further stimulate all pharmacists to specialize in an area of interest so as to enhance their output and actualize their potentials. A reasonable

proportion of pharmacists have specialized in various areas including clinical pharmacy (9.3%). The proportion of pharmacists practicing in urban area is four times those practicing in rural areas showing lack of access to qualitative pharmaceutical services by rural dwellers.

The attitude to Pharmaceutical Care is good as four out of every five respondents perceive the practice to be relevant. Also, over 80% of the respondents associated themselves with the practice thus showing a positive attitude to the practice. In a previous study, (8) 97% of Pharmacists in community and hospital practice saw the need for Pharmaceutical care practice. The association with practice was an act that identified routine pharmaceutical care practice without a deliberate organized plan of action. This was revealed as sixty-two percent indicated willingness to implement Pharmaceutical care practice in this study out of whom 19% indicated willingness to commence within six months. This corroborates with previous research findings that 80% of people are not ready to change right away. It is something they have to consider for a while and not everyone moves at the same pace. People do resist pressure to change if they are not ready for it. The trans theoretical model of change (TTM) have proved from research evidence of over 35years the following about people and change (9)

Prochasta and Declemente(10) observed that people who are intending to change their behavior beyond six months are in the pre contemplation stage (first stage), people who are intending to change their behavior within six months are in the contemplation phase (second phase), people who are ready to take action within thirty days are those in preparation phase (third phase) . Forty percent stated reasons why they do not practice pharmaceutical care in an organized way. Some of the reasons giving were 'Skills are needed 13.7%', 'Pharmaceutical care is not relevant' 9.8%, 'Time limitation" 5.9%.These reasons indicate a further need for intervention in the areas of equipping pharmacists with skills necessary for practice as well as evidenced based benefits of the practice .The question of lack of time would naturally be addressed when the benefits to be derived are obvious.

Statistical analysis revealed that respondents age >30-60 significantly($p=0.013$) affect their perception of the relevance of Pharmaceutical care to their practice, . The younger pharmacists are more enthusiastic about it's relevance probably because they were educated on the concept while still in university. Also, respondents' practice group, in particular community pharmacists as well as hospital pharmacists significantly($p=0.048$,$p=0.018$) affect relevance of the concept as well their willingness to incorporate it into their practice. Oparah and Eferekaya,(11) reported that 76% of Nigerian pharmacist were willing to embrace Pharmaceutical care practice with less experienced pharmacists showing more interest. This is similar to the report by Suleiman and Onaneye (8). As community and hospital pharmacists are the windows through which the profession interacts with the larger society, there is promise of effective service delivery if these groups are empowered relevant interventions.

V. CONCLUSSION

The attitude of Pharmacist in these two states towards the Pharmaceutical Care concept and it's implementation is good. However, there are challenges that need to be tackled to facilitate proper implementation of the concept.

RECOMMENDATION

There is need to intervene in order to improve the attitude of pharmacists to the Pharmaceutical Care concept. This is necessary because a positive attitude is a pre-requisite to acquisition of knowledge/skills and a productive practice.

CONFLICT OF INTEREST

The authors declare that there was no conflict of interest.

ACKNOWLEDGEMENTS

We do acknowledge the grace of the creator for enablement and to express our profound gratitude to the participants. We also thank our colleagues in various pharmacy practice groups for facilitating the distribution and retrieval of questionnaire especially Wariboko West, Elizabeth Odili, Precious Irrerua and Maureen Okenwa.

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