Pharmacy Practice in Various Practice Settings: The Pharmacists' Perspective

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ABSTRACT

Objective: The evolution of pharmacy practice to a more patient centred practice will be most beneficial if the practitioners have positive perception towards the practice. The purpose of this study was to explore pharmacists' perception of the various practice areas in pharmacy. **Methods:** A cross-sectional descriptive study was conducted among pharmacists in various practice areas in Benin City, Nigeria. A four part pre-tested self-completed questionnaire was used for data collection. SPSS version 21.0 was used for data analysis. Continuous data were presented as means and standard deviations. ANOVA was used to determine differences in mean perception scores in relation to practice areas. (p- values $\leq$ 0.05). **Results:** A total of 200 respondents participated in the study. Majority 116 (58.0%) of the respondents were males, married 100 (50.0%) and practiced in community pharmacies 96 (48.0%). The average mean perception score on pharmacy practice was 3.69 $\pm$ 1.04. Community and Industrial pharmacists agreed more significantly than other groups that reward is based on effort put in (p = 0.01). More respondents in academia 13 (38.2%) and hospital practice (18, 36.7%) considered their workload to be too much, than other practice areas. Few respondents from each of the practice areas considered their practice area to be very flexible with respect to family responsibilities and this was lowest for respondents who practiced in the industry 1 (4.8%). **Conclusion:** Study participants from community pharmacies, Academics and industrial pharmacy had higher positive perception about their practice areas than the hospital pharmacists.

Key words: Pharmacists' perception, Practice settings, Hospital and community pharmacists, Academic and Industrial pharmacists, Nigeria.

INTRODUCTION

The evolution of pharmacy practice into patient-centred clinical roles has enhanced value addition to patient care. This evolvement of pharmaceutical care has also created an increase in work related activities which has influenced the quality of work delivery and job perception in diverse ways.[1] Pharmacy practice aims to improve and maintain patients' health through patient-centered approach, where the pharmacist carries out structured medication reviews, improves medication safety and optimisation.[2] These activities are expected to reduce over-medication and avoidable hospital visits and admissions.[2] These will however, be most visible if the practitioners have positive perception of the practice, and are mentally and psychologically motivated to practice maximally. Meanwhile, several factors including the practice setting influences this practice.

Pharmacists practice in a variety of settings such as; hospital pharmacies, community pharmacies, academia and pharmaceutical industries; as well as non-governmental organizations and health service administration. Practice settings play a major role in pharmacy practice, as it determines and impacts on the roles and duties of a pharmacist. Also, the availability of the necessary and required resources in a practice setting allows for effective and satisfying practice. Work environment and job description play a very significant and important role in work output and perception about the job. This is because positive organizational environment aids in the improvement of work-life balance which results in increased professional satisfaction.[3] Excessive workload may also increase burnout and thereby, decrease efficiency. The chronic shortage of pharmacists appears to

been detrimental to the profession and has resulted in a consistent increase in the practice workload and to longer and less flexible working schedules.[4]

Job perception involves one's innermost thoughts, feelings and personal evaluation of his/her job. This perception is however influenced by the person's unique circumstances which may include: needs, values and expectations. An individuals' evaluation of their jobs will therefore be on the basis of factors which they consider to be important to them.[5,6] Furthermore, this may be associated with motivation and attitude to work and turnover. Employees' motivation to act in a particular way towards their job may generally depend on their level of job satisfaction which may be influenced by their perception toward their job.[7] In Maslow's view, (1943), human behavior is motivated by the satisfaction or frustration of needs, which are arranged in a hierarchy of prepotency from physiological needs through safety, social, esteem and self-actualization needs.[8,9] Job design is an approach that organizes schedules that meet organizational requirements for increased performance and incorporates the employee's skills and needs with the organizational requirements.[10]

This study explored pharmacists' perception of pharmacy practice in the various practice settings to provide insight and understanding of the expectations of pharmacists in different practice sectors. It aims to test the hypothesis that pharmacy practice settings impact on the pharmacists' job commitment and personal life.

METHODS

A cross-sectional study was conducted among pharmacists in various practice areas in Benin City, Nigeria. The Taro Yamane's sample size formula [11], was used to determine the sample size for pharmacists in each practice setting. The study participants were then selected using a convenient sampling method. Only pharmacists licensed to practice in Benin City were included, while pharmacists who had transferred their registration to other states were excluded.

The study tool was a four sectioned self-completed questionnaire, which was self-developed and validated by expert assessment and pretesting. The questionnaire was made up of a total of 28 questions. Section one collected information on socio-demographics of the respondents, while section two tested respondents' perception about pharmacy practice on a Likert-type scale of 1 to 5 with 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree and 5 = strongly agree. The average mean score for the items was then determined and considered positive if above 3. Section three sought information on respondents' perception on their practice areas and comprised three (3) multiple choice questions. Section four assessed the impact of practice area on commitments and personal life. Informed consent was obtained from respondents prior to the survey.

SPSS version 21.0 was used for data entry and analysis. Means and standard deviations were calculated and inferential statistics was done using Analysis of Variance (ANOVA) to determine differences in perception of pharmacy practice, among the pharmacists. P-values < 0.05 were considered significant. Data on perception on the various practice areas were presented in a simple frequency table.

Ethical approval

Ethical approval was obtained from the Ethics Committee of the Faculty of Pharmacy, University of Benin, Nigeria with reference number EC/FP/020/11. Verbal informed consent was also obtained from the study participants prior to the study.

RESULTS

A total of 200 respondents were proportionally allocated into different practice areas as follows: Community Pharmacy = 96, Academia = 34, Hospital Pharmacy = 49 and Industry = 21 were sampled. The questionnaire had an acceptable level of reliability with a Cronbach's alpha value of 0.7.

Overall, majority 116 (58.0%) of the respondents were males, married 100 (50.0%) and practiced in a community pharmacy 96 (48.0%). Most of the community pharmacists were employed superintendent pharmacists (43; 44.8%), next, were owner and superintendent pharmacists (30; 31.3%) and the rest locum pharmacists (18; 18.8%). The community pharmacists were mainly males 59 (61.5 %), single 52 (54.2 %), had a doctor of pharmacy degree 54 (56.3 %) and had practiced between 0 – 10 years 50 (52.1 %).while majority of the respondents in hospital practice were females 28 (57.1 %), single 29 (59.2 %), held a doctor of pharmacy degree 23 (46.9 %) and had 0 – 10 years of practice 25 (51.0 %). Majority of the respondents in academia were males 21 (61.8%), married 24 (70.6 %), had a masters' degree 16 (47.1 %) and had 11 -20 years of practice 12 (35.3 %). The respondents who practiced in the industry were also mostly males 15 (71.9 %), married 13 (61.9 %), had bachelor of pharmacy degree 9 (42.9 %) and had 0 – 10 years in practice 13 (61.9 %). Other demographics are as shown in Table 1.

The average mean perception score was 3.69 ± 1.039 which tends towards positive perception of their practice. Respondents agreed to be most satisfied if they had their own private practice alongside their current job, this had the highest mean score 4.03 ± 1.039 and was followed by respondents' perception of the recognition they received from the organization for the work they do. This had a mean score of 3.83 ±0.957. Majority of the pharmacists agreed that they engaged in high volume of work and were inadequately remunerated with mean scores of 3.82 ± 0.998 and 3.70 ±1.008 respectively. Majority of the respondents also agreed that they worked long hours per day (3.41 ±1.126), their reward was not based on quality of the effort they put in (3.45 ±1.251) and that there was always presence of necessary authority to ensure they performed their duties (3.62 ± 0.965) respectively. Table 2.

The respondents in all the groups agreed that they were working for long hours per day, always had the presence of necessary authority overseeing their work, encountered high volume of work and were inadequately remunerated. There was no significant difference in the mean scores of the respondents regarding these items. See Table 3.

Table 4 shows respondents' perception of the various practice areas. Overall, majority of the respondents in community practice 74 (77.1%) hospital practice 25 (51.0%), academia 20 (58.8%) and industry 15 (71.4%) considered the variety of tasks in their practice area as enough. Few respondents from community practice 15 (15.6%), hospital practice 4 (8.2%), academia 10 (29.2%) and industry 1 (4.8%) considered their practice area to be very flexible with respect to family responsibilities. However, majority of the respondents in community 55 (57.3%) and academia 24 (70.6 %) would definitely recommend their practice areas to a mentee, while few respondents from hospital practice 18 (36.7%) and industry 7 (33.3%) would definitely recommend their practice area to a mentee.

DISCUSSION

Generally, pharmacists in this study believed they did not get adequate recognition for their work from their employer. However, the community pharmacists had a significantly positive perception regarding this issue. Recognition could be a source of motivation to an employee and hence, may increase job satisfaction.[12] A

Table 1: Socio-demographic characteristics of respondents.					
	Total	**Community**	**Hospital**	**Academia**	**Industry**
Variables	**F (%)** **n = 200**	**F (%)** **n = 96**	**F (%)** **n = 49**	**F (%)** **n = 34**	**F (%)** **n = 21**
Sex					
Male	116 (58.0)	59 (61.5)	21 (42.9)	21 (61.8)	15 (71.9)
Female	84 (42.0)	37 (38.5)	28 (57.1)	13 (38.2)	6 (28.6)
Marital status					
Married	100 (50.0)	44 (45.8)	19 (38.8)	24 (70.6)	13 (61.9)
Single	99 (49.5)	52 (54.2)	29 (59.2)	10 (29.4)	8 (38.1)
Divorced	1 (0.5)		1 (2.0)		
Highest educational qualification					
B. Pharm.	60 (3.0)	31 (32.3)	20 (40.8)		9 (42.9)
Pharm. D	87 (43.5)	54 (56.3)	23 (46.9)	5 (14.7)	5 (23.8)
Master's Degree	38 (19.0)	11 (11.5)	4 (8.2)	16 (47.1)	7 (33.3)
PhD	15 (7.5)		2 (4.1)	13 (38.2)	
Years of practice					
0-10	99 (49.5)	50 (52.1)	25 (51.0)	11 (32.4)	13 (61.9)
11-20	66 (33.0)	29 (30.2)	17 (34.7)	12 (35.3)	8 (38.1)
21-30	23 (11.5)	11 (11.5)	4 (8.2	8 (23.5)	
>30	12 (6.0)	6 (6.3)	3 (6.1)	3 (8.8)	
Place of Practice		96 (48.0)	49 (24.5)	34 (17.0)	21 (10.5)
Designation in the Community Pharmacists (n=96)					
Owner and Superintendent	30 (31.3)				
Superintendent Pharmacist	43 (44.8)				
Locum Pharmacist	18 (18.8)				

Table 2: Respondents' perception about their job.

Items	N	Strongly agree F (%)	Agree F (%)	Undecided F (%)	Disagree F (%)	Strongly disagree F (%)	Mean ±SD
Reward is based on quality of effort put in	200	48 (24.0)	62 (31.0)	37 (18.5)	38 (19.0)	15 (7.5)	3.45 ±1.251
Work hours per day is very long	200	36 (18.0)	72 (36.0)	32 (16.0)	57 (28.5)	3 (1.5)	3.41 ±1.126
Presence of necessary authority to carry out duties	200	33 (16.5)	90 (45.0)	47 (23.6)	27 (13.5)	3 (1.5)	3.62 ±0.965
Your organization acknowledges / recognizes your work	200	41 (20.5)	112 (56.0)	27 (13.5)	12 (6.0)	8 (4.0)	3.83 ±0.957
Inadequate remuneration	200	45 (22.5)	80 (40.0)	50 (25.0)	20 (10.0)	5 (2.5)	3.70 ±1.008
Presence of high volume of work	200	51 (25.5)	92 (46.0)	28 (14.0)	27 (13.5)	2 (1.0)	3.82 ±0.998
I would be more satisfied if I have my own private practice alongside	183	67 (33.5)	73 (36.5)	28 (14.0)	12 (6.0)	3 (1.5)	4.03 ±0.966
Average mean score							3.69 ±1.039

Table 3: Group responses on pharmacists' perception about pharmacy practice.

Place of Practice	Community Pharmacy		Hospital Pharmacy N=49	Academia N = 34	Industry N = 21	p-value
	N	Mean ±SD	Mean ±SD	Mean ±SD	Mean ±SD	
Reward is based on quality of effort put in	96	3.69 ±1.136**	2.92 ±1.351	3.24 ±1.257	3.95 ±1.071**	0.0007
Work hours per day is very long	96	3.42 ±1.121	3.35 ±1.182	3.35 ±1.203	3.57 ±0.926	0.8829
Presence of necessary authority to carry out duties	96	3.65 ±0.951	3.39 ±1.037	3.88 ±0.913	3.57 ±0.870	0.1443
Your organization/community acknowledges/ recognizes your work	96	4.02 ±0.917*	3.57 ±1.041	3.68 ±0.976	3.81 ±0.750	0.0398
Inadequate remuneration	96	3.63 ±1.008	3.94 ±0.899	3.59 ±1.019	3.67 ±1.197	0.3013
Presence of high volume of work	96	3.79 ±0.994	4.02 ±1.090	3.68 ±1.007	3.67 ±0.730	0.3649
I would be more satisfied if I could have my own private practice alongside (for those who do not have)	80	4.23 ±0.941***	4.06 ±0.988*	3.41 ±0.957	4.25 ±0.550**	0.0002

*<0.05, **<0.01***<0.001

Table 4: Perception of Pharmacists on the various practice areas.

Variables	Place of practice	Responses		
		Too many F (%)	Enough F (%)	Not enough F (%)
Considering the variety of tasks in your practice area, would you say they are	Community n = 96	17 (17.7)	74 (77.1)	5 (5.2)
	Hospital n = 49	18 (36.7)	25 (51.0)	6 (12.2)
	Academia n = 34	13 (38.2)	20 (58.8)	1 (2.9)
	Industry n = 21	5 (23.8)	15 (71.4)	1 (4.8)
		Very flexible F (%)	Somewhat flexible F (%)	Inflexible F (%)
How flexible is your practice area with respect to family responsibilities	Community n = 96	15 (15.6)	66 (68.8)	15 (15.6)
	Hospital n = 49	4 (8.2)	36 (73.5)	9 (18.4)
	Academia n = 34	10 (29.2)	23 (67.6)	1 (2.9)
	Industry n = 21	1 (4.8)	19 (90.5)	1 (4.8)
		Definitely F (%)	Probably F (%)	Will not F (%)
Would you recommend your practice area to a mentee?	Community n = 96	55 (57.3)	35 (36.5)	6 (6.3)
	Hospital n = 49	18 (36.7)	27 (55.1)	4 (8.2)
	Academia n = 34	24 (70.6)	7 (20.6)	3 (8.8)
	Industry n = 21	7 (33.3)	11 (52.4)	3 (14.3)

previous study in south – south Nigeria among hospital pharmacists reported that only a few pharmacists indicated that they received recognition for work well done.[13] In a study conducted in western Nigeria, hospital pharmacists agreed that recognition from their boss was very important in motivating them on their jobs.[12]

Pharmacists in all the practice sectors perceived that they worked long hours per day. Long work hours may result in burnout and fatigue of the pharmacists and consequently increase the tendencies for errors in the discharge of duties, which may impact on patient safety. A previous study carried out in Romania showed that majority of the pharmacists were satisfied with their work hours.[14] This difference may be because of higher number of pharmacists or difference in study design.

In the study, community pharmacists seemed to have the most opportunities to utilize their skills and abilities, followed by pharmacists in the industry, while hospital pharmacists had the least opportunities. In a pharmacy workforce survey in the West Midlands (UK) many community pharmacists were frustrated regarding under-utilization of their professional knowledge and their yearning for greater respect and recognition from physicians.[15] A study from the United States reported that pharmacists in community (chain and independent) pharmacies perceived that they were using their skills to lesser extent than their peers employed in hospitals because they were less involved in non-distributive functions (e.g., direct patient care).[16] Differences in the work environment, policies and guiding practice principles associated with the practice areas and geographic locations, may have contributed to this finding. Low utilization of skills may result in frustration at work and diminished job satisfaction.

The low utilization of skills and abilities in hospital pharmacists as observed in this study, may be related to their job tasks and level of inclusiveness in patient care, in Nigeria. A previous study also showed that pharmacists where dissatisfied with the opportunities and the perceived under-utilization of their skills and knowledge.[15] Another previous study also emphasized the need for pharmacists to review patients' medical history and the physicians' prescriptions as well as educate the patients and other health professionals on safe medications. [17]

Pharmacists in this study believe they were inadequately remunerated; this is similar to the findings of a study conducted among hospital pharmacists in south - south Nigeria.[13] Inadequate remuneration may reduce motivation which could negatively impact on the quality of services rendered. This may be in terms of decreased efficiency and effectiveness of the pharmacists in rendering pharmaceutical care and other areas of pharmacy practice.

The study shows that pharmacists in each practice area considered the variety of tasks in their practice area to be adequate. A similar study conducted in Zimbabwe showed that almost half of the pharmacists considered their workload to be heavy or reasonable.[18] Also, a previous study on job-related stress experienced by hospital pharmacists in the United States, reported that excessive workload was one of the most stressful situations in their place of work.[19] This is however different from a previous study conducted in Nigeria where majority of the pharmacists were satisfied with their responsibilities.[13] Excessive workload may result in burnout, which increases the tendency for occurrence of errors in the discharge of one's duties. The difference in the findings could be attributed to shortage of pharmacists in some locations at varying degrees. The difference in the variety of tasks carried out in different geographic locations may also impact on workload.

Furthermore, only few pharmacists in each practice area perceived their practice area to be very flexible with respect to family responsibilities. This also may impact on the pharmacists' job satisfaction as the need for socialization is inherent in humans. A balance between work, personal and family life increases the motivation and effectiveness of the worker. This finding is however different from that of a study conducted in India were the pharmacists reported a good balance between their workload and personal life.[1]

Majority of the pharmacists in academia and community practice would definitely recommend their practice area to a mentee. This finding may be strongly related to the high level of job satisfaction in these practice areas. On the other hand, only few pharmacists in hospital and industrial practice appear to be willing to recommend their practice area to a mentee.

CONCLUSION

Pharmacists in academia, industry and community practice have more positive perception of their practice than pharmacists in hospital practice and this is attributed mainly to their work environment. Workload was mostly perceived to be enough in all practice areas, however the pharmacists would like to see improved flexibility in their work schedule across the practice settings for effective balance with personal life. Also, majority of pharmacists in academia and community practice settings would definitely recommend their practice area to a mentee.

Declaration

Ethics approval and consent to participate

The study was approved by the ethics committee of Faculty of Pharmacy, University of Benin and informed consent was obtained from the respondents prior to the study.

ACKNOWLEDGEMENT

CONFLICT OF INTEREST

No conflict of interest is associated with this work

ABBREVIATIONS

ANOVA: Analysis of Variance; **UK:** United Kingdom.

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