

Knowledge and attitude of the Hospital Pharmacists towards achieving the National Health Sector Goals

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ABSTRACT

Background: Hospital pharmacists have an important role to play in the attainment of the national health sector goals. It is important that they have the relevant knowledge as well as attitude towards pharmaceutical care in order to be able to perform this role effectively.

Objective: To assess pharmacists' knowledge and attitude in attaining national health sector goals using pharmaceutical care model as standard of practice.

Method: A 21-item self completion questionnaire was administered to 121 pharmacists in selected facilities across the three levels of health care services in Lagos state. The facilities were chosen across the 3 senatorial districts of the state. The concept of pharmaceutical care was used as the standard of practice. Retrieved questionnaires were analyzed using descriptive statistics with the aid of Epi-info version 3.5.1 statistical package. Test for statistical significance was determined through the use of the chi-square.

Results: Postgraduate education amongst the respondents is low, with only 29.0% of the respondents having a postgraduate degree. However 86.0% of the respondents have attended update seminars/conference/scientific workshops within the last 3years. Many believed that their knowledge base is adequate (75.2%) but admitted there is need for more training (92.4%). Many of the respondents acknowledged that adequate knowledge of disease pathophysiology (85%) and availability of patient medical history and medication records (82.6%) are important requirements in pharmaceutical care practice. An overall assessment of the knowledge of pharmaceutical care showed a mean score of 26.17±4.98 in 87% of the respondents out of a maximum possible score of 30 and a minimum of 6 with an average of 18 on a 6-item assessment criterion. Pharmaceutical care skill assessment was found to be satisfactory as shown by an average skill assessment score of 69.5%. While many do not believe that pharmaceutical care is a burden (80.1%), many are however willing to fully commit themselves to its implementation in their health facility (92.6%). There was however no statistically significant association between adequacy of knowledge and willingness to commit to full pharmaceutical care implementation ($\chi^2=0.23$, $P=0.6330$, $P>0.05$).

Conclusion: Hospital pharmacists in Lagos state have adequate knowledge of pharmaceutical care. They are also willing to commit themselves towards the implementation of pharmaceutical care in their practice settings. However there was no statistically significant association between their knowledge of pharmaceutical care and willingness to practice pharmaceutical care.

Key words: Pharmacists, hospital, pharmaceutical care, health sector, Millennium Development Goals,

Connaissance et attitude des pharmaciens travaillant dans les hôpitaux vers la réalisation des objectifs du secteur de la santé nationale

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RESUME

Objectifs: Evaluer la connaissance et l'attitude des pharmaciens dans la réalisation des objectifs du secteur de la santé nationale en faisant usage du modèle de soins pharmaceutiques comme le modèle de la pratique.

Méthode: Un questionnaire auto-réalisable à 21 points a été administré à 121 pharmaciens dans des établissements médicaux choisis dans tous les trois niveaux de services de soins sanitaires dans l'Etat de Lagos. Les établissements ont été choisis dans tous les 3 districts sénatoriaux de l'état. Le concept de soin pharmaceutique a été utilisé comme norme de pratique. Les questionnaires récupérés furent analysés à l'aide de la statistique descriptive avec l'aide de la version 3.5.1 du logiciel de statistique Epi-info. Un test de signification statistique fut déterminé par l'usage du khi-2.

Résultats: L'éducation de troisième cycle parmi les répondants était faible, avec seulement 29,0% des répondants possédant un diplôme du troisième cycle. Cependant, 86,0% des répondants ont participé à des séminaires/conférence/ateliers scientifiques dans ces 3 dernières années. Beaucoup croient que la connaissance est adéquate (75,2%) mais admettent qu'il faut plus de formation (92,4%). Plusieurs répondants avouent que la connaissance adéquate de la pathophysiologie des maladies (85%) et la disponibilité de l'histoire médicale et des rapports de médication (82,6%) sont des exigences nécessaires en pratique de soins pharmaceutiques. Une évaluation globale de la connaissance en soin pharmaceutique a indiqué une note moyenne de $26,17 \pm 4,98$ chez 87% des répondants sur une note maximale possible de 30 et un minimum de 6 avec une moyenne de 18 sur un critère d'évaluation à 6 points. L'évaluation de la compétence en soin pharmaceutique s'est révélée satisfaisante comme l'indique une moyenne d'évaluation de compétence de 69,5%. Alors que beaucoup ne croient pas que le soin pharmaceutique est un fardeau (80,1%), nombreux, cependant, sont prêts à s'engager totalement à l'appliquer dans leur centre médical (92,6%). Cependant, il n'y avait aucune association statistiquement importante entre la justesse de la connaissance et l'enthousiasme à s'investir dans l'application totale de soin pharmaceutique ($\chi^2=0,23$, $P=0,6330$, $P>0,05$).

Conclusion: Les pharmaciens travaillant dans les hôpitaux de l'Etat de Lagos ont une connaissance adéquate en soin pharmaceutique. Ils sont également prêts à s'engager dans l'application de soin pharmaceutique dans leurs cadres de pratique. Cependant, il n'y avait aucune association statistiquement importante entre leur connaissance en soin pharmaceutique et leur enthousiasme à pratiquer les soins pharmaceutiques.

Mots clés: Pharmaciens, hôpitaux, soin pharmaceutique, secteur de la santé, Millénaire objectifs de développement,

INTRODUCTION

Health, according to the World Health Organization (WHO) is "a state of complete physical, social and mental well being and not merely the absence of diseases or infirmities".¹ Health as a societal product has had religious, economical, philosophical, cultural and political undertones throughout history.²

The Alma-Ata declaration of 1978 in modern day Kazakhstan strives to achieve as its primary objective, universal health coverage by the year 2000.³ However the dawn of the millennium in 2000 and the failure to achieve the primary objective of the Ala-Ata declaration in the targeted year as well as in addition to other pressing global issues gave rise to the Millennium Declaration and the Millennium Development Goals (MDGs)

In 2000, the heads of governments of most countries of the world made a historic commitment to eradicate poverty and improve the health and welfare of the world's poorest people within 15 years. This commitment was set forth in the United Nations. This vision expressed 8-time bound goals know as the Millennium Development Goals (MDGs). Three (3) of these MDSs are health related and they include: Reduction in under five mortality by two-thirds, improvement in maternal health and reduction in maternal mortality by three-quarters and bringing to a halt and reverse the spread of HIV/AIDS, tuberculosis, malaria and other diseases.^{4,5,6}

The Nigerian National Health Policy and Strategy strive to achieve health for all Nigerians on the basis of social justice and equity. Promulgated in 1988 and revised in 2004, it seeks to accommodate trends and realities in national and global health situations (including the MDGs).⁷ It seeks to bring about a comprehensive health promoting and protecting, disease preventing, rehabilitating and health restoring system based on Primary Health Care.^{7, 8} Pharmacists as health care professionals have a role to play in the attainment of our national health sector goals through health promotion. Health Promotion is the process of enabling people to increase control over and improve their health.⁹ Health promotion is an integral part of the pharmaceutical care process irrespective of the practice setting.¹⁰ It entails health education and information, an influence on the need for healthy public policies, raising awareness and the empowerment of the population.¹¹ Hospital Pharmacies have a role to play in health promotion through their area of core clinical competence: pharmaceutical care.

Pharmaceutical care has been defined as the responsible provision of drug therapy for the purpose of achieving a definite outcome that improves a patient quality of life.¹¹ For hospital pharmacists to be able to perform their health promoting roles effectively, it is important that they have/ possess the requisite knowledge, attitude and skills in the area of pharmaceutical care and this forms the basis of this research work.

The general objective of this study is to assess the knowledge and attitude of hospital pharmacists in Lagos state in attaining the national health sector goals using pharmaceutical care as a standard of practice. The specific objective is to determine if any association exists between hospital pharmacists' knowledge of pharmaceutical care and their willingness to practice pharmaceutical care.

METHODS

Setting and sample

The study was carried out in Lagos State, south west Nigeria. A total of 121 hospital pharmacists were included in the study and were spread across the three levels of hospital practice: Primary, Secondary and Tertiary levels. A convenience sampling method was used for this research

Research instrument

The research instrument used was a 21-item self completion questionnaire which was administered to the 121 pharmacists in selected health facilities across the three levels of health care services in Lagos State. The facilities were chosen across the 3 recognized senatorial districts of the state. The concept of pharmaceutical care was used as the standard of practice.

Data analysis

The retrieved questionnaires were analyzed using descriptive statistics with the aid of Epi-info statistical package version 3.5.1. The test for statistical significance was determined through the use of the Chi-square test statistic. There were 6 questions in all with 5 possible answers per question under the knowledge of pharmaceutical care by hospital pharmacists and correlating to a maximum possible score of 30 and a minimum score of 6. A logical neutral point was assumed to be 18. Since the summated score correlated with the level of hospital pharmacists' knowledge of pharmaceutical care, scores above 18 were taken as positive indicators of adequate knowledge of

pharmaceutical care. The standard deviation was calculated as a measure of item variability from the mean. Any low standard deviation indicated a cluster of responses to the mean while high standard deviation reflected high variability of opinion from the mean. The percentage performance was the number of responders who scored above the critical or neutral point on the rating scale (i.e. 4 or 5). Association between the knowledge of pharmaceutical care and the willingness to practice pharmaceutical care was analysed using the chi-square test statistics at 95% confidence levels and 5% level of significance.

RESULTS

Table 1 shows the demographic distribution of the respondents. About two-thirds of the respondents have less than 10 years of hospital pharmacy practice experience that ranged between less than a year to about ten years. Majority of the respondents practiced at the tertiary level of healthcare.

Table 2 shows hospital pharmacists' response to their

knowledge of pharmaceutical care. Questions asked from participants ranged from adequacy of knowledge about pharmaceutical care, pharmacists responsibility in drug therapy problems, the importance of pharmacists' accessibility to patient medical record and patient medication history in the provision of pharmaceutical care as well as the need for more training in pharmaceutical care. 87% of the responders scored above 26.17 ± 4.98 out of a minimum of 6 and a maximum of 30 with a neutral point of 18.

Table 3 shows hospital pharmacists' willingness to practice pharmaceutical care. A large number of respondents were willing to practice pharmaceutical care (93%)

Table 4 shows the result of the test for any statistically significant association between the hospital pharmacists' knowledge of pharmaceutical care and the willingness to actually practice pharmaceutical care. No statistically significant association was found ($\chi^2=0.23$, Yates corrected, $P=0.6330$, $p>0.05$)

Table 1: Demographic profile of respondents

Variables	Number Of Respondents	Percentage
SEX:		
Male	39	32.2
Female	79	65.3
Non response	3	2.5
Age:		
20-30	31	25.6
31-40	57	47.1
41-50	23	19.0
50 and above	9	7.4
Non response	1	0.8
Number of years of hospital pharmacy practice experience:		
0-5	61	50.4
6-10	19	15.7
11-15	17	14.0
16-20	14	11.6
21 and above	10	8.3
Level of healthcare facility:		
Primary	7	5.8
Secondary	46	38.0
Tertiary	67	55.4
Non response	1	0.8

Table 2: Item analysis of hospital pharmacists' knowledge about pharmaceutical care

Items	Mean Value	Standard Deviation	% Performance
Adequacy of knowledge about pharmaceutical care	3.84	0.99	75.20
Need for more training	4.44	0.78	92.56
Pharmacists take responsibility in Drug Therapy Problems	4.50	0.86	88.43
Knowledge of pathophysiology not necessary*	4.27	1.15	85.13
PMR ^a and PMH ^b necessary for Pharmaceutical care	4.81	0.31	95.87
PMR is indispensable in Pharmaceutical care provision	4.31	0.89	82.64
Total	26.17	4.98	87(Approx)

a. Patient Medical Record

b. Patient Medication History

Table 3: Item analysis of hospital pharmacists' willingness to practice pharmaceutical care

Item	Mean	Standard Deviation	% Performance
Willingness to practice pharmaceutical care	4.76	0.45	93

Table 4: Test for statistical signification of association between knowledge of pharmaceutical care and willingness to practice pharmaceutical care

Willingness to practice pharmaceutical care			
Adequacy of knowledge about pharmaceutical care	Willing	Unwilling	Total
Adequate	98	7	105
Inadequate	15	1	16
Total	113	8	121

 $\chi^2=0.23$ (Yates corrected)

p=0.6330

P>0.05

DISCUSSION

The results of this study revealed an adequate knowledge of pharmaceutical care by hospital pharmacists in Lagos State as shown by a mean score of 26.17 ± 4.98 in 87% of the responders out of a maximum possible score of 30 and minimum score of 6 with an average of 18 on a 6-item assessment criteria. This study is in agreement with a similar study carried out in northeastern Nigeria on the knowledge of hospital pharmacists on pharmaceutical care, hospital pharmacists were found to have a good knowledge of pharmaceutical care, and the need to carry out corresponding actions based on their good knowledge of pharmaceutical care was recommended.¹²

Willingness to practice pharmaceutical care was also high as shown by a mean score of 4.76 ± 0.45 in 93% of responders out of a possible score of 5. A similar study carried out in Ogun State revealed a good attitude of pharmacists towards the implementation of pharmaceutical care but a weak ability towards its implementation in 2011.¹³ A concerted effort among policy makers and other stake holders to address the weaknesses as a means of improving therapy outcomes was recommended.¹³ A study by Nwaozuzu et al on attitudes of hospital pharmacists in Nigeria towards pharmaceutical care found that hospital pharmacists showed a negative attitude towards pharmaceutical care. Efforts at fostering positive attitude towards pharmaceutical care were recommended.¹⁴ This study however revealed that many of the responders never considered pharmaceutical care as a burden (80.1%) with many of them being fully committed to its implementation in their health care facility (92.6%) which was in agreement with a study carried out on hospital pharmacists' willingness in Kuwait to practice pharmaceutical care where all responders showed high willingness towards the implementation of pharmaceutical care in their practice.¹⁵

A statistically non-significant association between the adequacy of knowledge about pharmaceutical care and the willingness to fully implement pharmaceutical care was equally observed.

While the research aims to ensure an even coverage of the three senatorial zones in Lagos, however, very remote/far areas such as Epe, Badagry and Ajah were not included in the study thus excluding hospital pharmacists working in those areas.

CONCLUSION

Hospital pharmacists have an adequate knowledge of pharmaceutical care as shown by a mean score of 26.17 ± 4.98 in 87% of the responders. There was however a

non-statistically significant association between their knowledge of pharmaceutical care and their willingness to practice pharmaceutical care.

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