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Original Research Article

Factors affecting availability and use of herbal medicines by community pharmacists

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Abstract

Purpose: The aim of this study was to evaluate the contribution of community pharmacists to the use and availability of herbal medicines in two towns in Delta state, Nigeria.
Methods: A cross sectional study was conducted with the aid of self-administered questionnaires distributed to superintendent pharmacists in community pharmacies, responses were filled and questionnaires were collected and analyzed.
Results: Of the 45community pharmacists that voluntarily participated in the study, 25 (55.6%)stocked herbal medicines in their premises. Majority of them said they got their information of herbal medicine from the internet 2 (30.7%).Sixty percent of the respondents believed that herbal medicines were somewhat effective, some, 13 (28.9%), believed they were effective while only few 5 (11.1%) believed they were ineffective. Patients (73.3%), Physicians 11(24.4%) and other healthcare workers 22 (48.95) patronize community pharmacies for herbal medicine products. The perceived reasons for which they receive patronage of herbal medicine products were because herbal medicines were cheap 10 (13.1%), safe 15 (20.3%), natural 26 (35.5%) and efficacious 17(30%). The volume of herbal medicines stocked in community pharmacies minimal as majority of pharmacies31,(68.9%) have less than ten percent of their total stock as herbal medicines and 13.3% allocated only between ten and twenty percent of their total stock to herbal medicines. Perceived barriers to the use of herbal medicines included limitation of knowledge 33(37.5%), inappropriate literature 28(30.7) and lack of regulatory measures 27(30.7%). A large proportion of the respondents indicated interest on improving their knowledge on herbal medicines 38 (84.45%). Among suggested measures to improve on herbal medicines use, adequate regulatory measures ranked topmost 17(35%).
Conclusion: More than half of the community pharmacists stocked herbal medicines at their premises and were willing to update their knowledge in order to improve on the safe use of these products.

Keywords: Herbal medicines, Community pharmacies, Pharmacists.

Indexing: Index Copernicus, African Index Medicus

Introduction

Herbal medicines, which are a component of Complementary and alternative medicines have become popular in different parts of the world [1].The World Health Organization has defined Herbal medicines as using herbal materials, herbal preparation, and finished herbal products that contain active ingredients, part of plant or another plant material or combination of both to prevent or treat disease of humans [2] and they have also been defined as herbal therapies that are neither taught in school nor available in the hospital [3]. Presently, herbal medicines are prepared as over the counter drugs and have been prepared in different pharmaceutical dosage forms such as syrups, capsules and extract [4] and are found as part of the stock in some community pharmacies [5]. Studies have shown that because of the upsurge in the use of herbal medicines, community pharmacists are increasingly being sought out as sources of information on herbal medicines [4] and there are more queries from patients on the use of herbal medicines than ever [6]. Pharmacists are primary health providers and are expected to give guidance to their patients on the use of medicines and these include herbal medicines which are now commonly sold as Over- the – Counter

drugs. Unfortunately, some studies [7, 8], have shown the inadequacies and limitation of pharmacist to counsel patients on the use of herbal medicines which was as a result of shallow knowledge on the pharmacology and interactions of herbal medicines remedies. Consequently, ninety percent of pharmacists in an Omani study [4] in Muscat, were interested in attending continuing education programs to improve on their knowledge on herbal drugs. On the other hand, Chang et al [9] reported that 45% of pharmacists had a continuing education on herbal medicines and as such more likely to answer queries on the use of herbal medicines. About 30% of pharmacist relied on internet, magazines and product leaflets to update their knowledge on herbal drugs[4] while a study carried out in Lagos Nigeria revealed that over 50% of Community pharmacists relied on package insert leaflets for information on herbal medicines. Reports from Singaporean study [8] shows that while over sixty percent of pharmacists learn about herbal medicines from books and magazines, the internet, friends and family were also resourceful. Pharmacists, in an attempt to meet up with the expectations of patients and the general public, had sought various means of improving on their knowledge of herbal medicines.

With the present upsurge in the use of herbal medicines there is therefore the need for the community pharmacist to be equipped to make necessary contribution to the use of herbal medicines.

The aim of the study was to evaluate the contributions of community pharmacists towards the use and availability of herbal medicines.

Methods

Setting

The study was carried out in January 2014 within two towns in Delta state which is located in the southern part of Nigeria. Agbor is located in the Northern part of the state while Warri is located in the Southern part of the state. A list of community pharmacies registered in the state in the year 2013 was obtained from the Chairman of the Association of Community pharmacists, Delta state chapter and showed a total of 45 community pharmacies were registered at both Agbor and Warri towns.

Study design

This was a cross sectional study conducted among superintendent pharmacists in community pharmacies with the aid of a self-administered questionnaire.

Study Population

Forty-five superintendent pharmacists in community pharmacies in Agbor and Warri, Delta State-Nigeria made up the study population.

Development of questionnaire

The questionnaire was developed after a review of several literatures; the items were chosen in accordance with the study objectives. The questionnaire consisted of two sections with a total of 20 items. Section A examined social demographics of the responding pharmacists which included Age, Gender, Year of qualification, Years in Practice as community pharmacists, and highest academic qualifications while section B focused on the Perception of Community Pharmacists towards herbal medicine usage and its limitations. Items such as sources of information on the use of Herbal Medicines, Stocking of herbal medicines, perceived effectiveness of Herbal medicines were included in this section.

A pilot study was carried out with the questionnaire by distributing them to four community pharmacists at a town in Delta state (Obiaruku), necessary modifications were made before it was used in the study.

Statistical analysis

Data was analyzed using Microsoft excel and results were presented in frequencies and percentages.

Results

Demographics

A total of 45 community pharmacists participated in the study and were predominantly within the 40-49 age range 20 (44.4%). The participants were more of males 38 (84.4%). Pharmacists who were between one to five years in practice as community pharmacists were more 18(40%); Bachelor of pharmacy (B.Pharm) degree was the most common highest qualification obtained by the responding pharmacists. Other details of the social demographics are shown on Table 1.

Out 45 premises studied, 25 (55.6%) stocked herbal medicines. A large percentage of community pharmacists 31 (68.9%) indicated that herbal medicines constituted only less than 10% of their total stock volume (Table 2).

Majority 40 (88.9%) of the community pharmacists believed they should be able to counsel patients on the use of herbal medicines while only a few 5 (11.1%) believed they could not. More than half of the respondents (60%) rated herbal medicines to be somewhat effective, while some (28.9%) believe they

are effective and only a few (11.1%) believed otherwise.

The various sources of information on herbal medicines used by the respondents included the Internet (30.7%), Journals (29.3%) product literature (29.3%) and (10.7%) from knowledge acquired from school.

Table 1: Socio-demographics of study population

Variables	Frequency	Percent
Age (Years)		
20-29	10	22.2%
30-39	6	13.3%
40-49	20	44.4%
50-59	6	13.3%
60-69	3	6.7%
Gender		
Male	38	84.4%
Female	7	15.6%
Years in Practice as a community pharmacist		
1-5	18	40%
6-10	12	26.7%
11-15	3	6.7%
16-20	4	8.9%
21 -30	5	11.1%
Years of establishment of premises		
1-5	10	22.2%
6-10	17	37.8%
11-15	12	26.7^
15 and above	6	13.3%
Highest qualification obtained		
B.Pharm	28	62.2%
Pharm.D	15	33.3%
Postgraduate qualification	2	4.4%

Table 2: Volume of herbal medicines stocked at pharmacies

Stock percent	Frequency	Percentage
Less than 10%	31	68.9%
10-20%	4	8.9%
Between 20% and 40%	4	8.9%
Above 40%	Nil	Nil
None (0%)	6	13.3%
Total	45	100%

Only 24.4% of the respondents received doctor's prescription on herbal medicines. Others who patronized them on herbal medicines are shown in Table 3.

Pharmacist perceived reasons for the usage of herbal medicines included the belief that herbal medicines are natural(35.1%), efficacious (30%), safe(20.3%) , cheap (13.51%) and a few others (8.1%). Different herbal medicines sold at these premises included General preparations (42.3%) Health tonic (42.6%), slimming agents (18%) and others (9.8%) which included antibacterial and sexual enhancement products. Adults made up 55% of the patients to which herbal medicines were sold while the elderly and children were 39% and 6% respectively.

Table 3: Patronage on herbal medicines

Source of patronage	Frequency	Percentage
Patient		
Yes	33	73.3
No	12	26.7
Total	45	100
Doctor's Prescription		
Yes	11	24.4
No	34	75.6
Total	45	100
Other healthcare providers		
Yes	22	48.9
No	23	51.1
Total	45	100

Some factors were identified by the respondents as limitations to the roles pharmacists play in the use of herbal medicines. These included limited knowledge (37.5%), inappropriate literature (31.8%) and lack of regulation of the use of herbal medicines (30.7%).

Some measures suggested by the respondents to regulate herbal medicines were more regulatory measures should be put in place to improve safety and efficacy (17, 35%), education and enlightenment of the public on the right usage of herbal medicines (9,19%) should also be created. Others are shown in Table 3. A good number 38 (84.4%) of the respondents were willing to update their knowledge on the use of herbal medicines while only a few 7(15.6%) were not.

Table 4: Suggested measures to regulate production and use of the use of herbal medicines

Measures	Frequency	Percentage
Public enlightenment	9	23.1%
Regulatory measures	17	43.6%
Dosage regimen regulation	8	20.5%
Standardization of production process	5	12.8%

Discussion

This study has revealed that herbal medicines are stocked in community pharmacies in the studied area. This is similar to the findings of a previous study [5]

in South-western Nigeria where over half of the pharmacies studied stocked herbal medicines.

Among the perceived reasons for herbal medicines use , "herbal medicines are natural" ranked highest which is similar to another study [5] but does not agree with the findings of some other studies[10],[11] which reported herbal medicines being more efficacious as the major reason for their use. Most of the pharmacists who participated in this study stocked herbal medicines as only less than ten percent of their total stock volume, this could be due to the ease with which herbal medicines are accessed by the populace from herbal medicines hawkers and peddlers .Majority of the pharmacists believed they could adequately counsel patients on the use of herbal medicines and this corroborates the finding of Oshikoya et al [12] where over half of the pharmacists studied counsel patients on the appropriate use of herbal medicines however, this is different from the reports of another study [8] where over 81% of pharmacists felt they had inadequate skills and knowledge to counsel patients on the use of herbal medicines . Sources of information on herbal medicine however noted the internet as the major sourceof information on herbal medicines however a previous study [8] reported product leaflet inserts as the major source of information while an Omani study [4] reported knowledge of pharmacognosy in school as the major source of information on herbal medicines. The study showed that majority of the respondents believedherbal medicines are only somewhat effective while other studies [4],[5],[13] have reported that pharmacists believe that herbal medicines have varying effectiveness.

Lack of adequate knowledge and inadequate literature on herbal medicines was cited as the major factors impeding pharmacists from carrying out their roles in the use of herbal medicines. As a result almost all the pharmacists indicated interest in updating their knowledge on herbal medicines, in order to make them better equipped for their roles in providing necessary information for the increasing number of users of herbal medicine.This corroborates the findings of another study [4] which reported that over 90% of the study population where interested in updating and improving their current knowledge on herbal medicines.

The respondents also suggested that adequate regulatory measures for herbal medicines be put in place. Report from a previous study [5] has also suggested that a different regulatory body be put in charge of regulating herbal medicines.

CONCLUSION

Most pharmacists affirmed that herbal medicines possess some level of effectiveness, and are therefore willing to update their knowledge of these products so as to provide adequate information on their use to the rising number of users among the populace. Adequate regulatory measures should also be put in place to ensure the safety of these products.

Declarations

Acknowledgement

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Conflict of Interest

No conflict of interest associated with this work.

Contribution of Authors

The authors declare that this work was done by the authors named in this article and all liabilities pertaining to claims relating to the content of this article will be borne by them.

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