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Use of traditional medicines among pharmacists in Nigeria

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ABSTRACT

Background: Traditional Medicine (TM) use is growing and emerging as an issue of public healthcare importance. Recently, there are increasing interest and trends of TM use among health care professionals (HCP). However, information regarding TM use among pharmacists in Nigeria is limited. This study investigates the use of TM among pharmacists in Nigeria.

Materials and methods: This study was a cross sectional study in the form of an online survey (Google Surveys). Eligible participants were pharmacists currently practicing in Nigeria. The closed-ended questionnaire was developed and validated prior to the data collection. The hyperlink to the online survey questionnaire was shared with the eligible pharmacists via social media groups belonging to pharmacists' professional associations.

Results: A total of 262 of completed responses were received. Among the respondents, 53.2% had over 5 years of pharmacy practice experience and 48% were practicing in hospitals. 225 respondents (85.9%) have ever used TM at least once in their lifetime, while 21.3% were currently using TM at the time of the data collection. Those that used TM in the last 12 months were 47.0%, while those that used it within the last week, one month and six months were 15.4%, 10.5% and. 12.8% respectively. Herbal medicine was the most frequently used TM among the respondents (94.2%). The most common reason for using TM was for the maintenance of general well-being (38.2%). Among the TM users, 17.3% have reported experiencing an ADE-related to the TM use. Among the respondents, 44.7% felt TM is safe for use while 35.5% indicated that they will recommend TM to their patients.

Conclusion: TM is commonly used by a pharmacist in Nigeria particularly among those practicing in the community and hospital. This signifies an increasing acceptance of TM among healthcare professionals and a call for more education and training on TM for effective pharmaceutical care delivery.

1. Introduction

Traditional Medicine (TM) use is growing and emerging as an issue of public healthcare importance. The global prevalence of use is of up to 80% [1], the proportion which varies among countries due to different socio-economic and cultural backgrounds [2]. In Nigeria, over 80% of the general population is using some form of TM [3]. The acceptance and predominant use of TM by the majority of the public may be related to the availability, accessibility, self-administration, and the perception that it is "safe" and "efficacious [4].

Recently, there are increasing interests and trends of TM use among HCPs internationally [5,6], including Africa [7,8]. The HCPs in the kingdom of Bahrain have utilized TM personally for the management of diseases and wellbeing, as well as recommending it to other patients [9]. In a study conducted in Trinidad and Tobago, the prevalence of TM use was 92.4%, 64.9% and 83.3% among nurses, doctors and pharmacists respectively. A study performed in South Africa has shown that 43% of pharmacists have recommended TM to patients for the treatment of eczema [8]. In addition, the community pharmacists have also been reported to be involved in screening TM-users for adverse drug events (ADE). Thirty seven patients with ADE were found to be taking some forms of natural health products in a study by Necky et al. among community pharmacies in Canada [10]. The HCPs have an increased tendency of using TM due to the basic knowledge they obtained during

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their training in school and interaction with patients in clinical practice. Moreover, their confidence in the efficacy and safety, knowledge, views and experiences about TM will influence their pro-activeness in enquiring about TM as well recommend it to patients. Consequently, the TM use by the HCPs may influence the overall clinical outcomes and prevention of TM-related ADEs [8]. In Nigeria, there are over twenty thousand licensed pharmacists in Nigeria, practicing in a different aspect of healthcare practice [11]. In addition, most of them are practicing in either clinical, community or hospital pharmacies were these TM are dispensed, sold, and recommended to patients alongside conventional medicines [12]. In South-western Nigeria, 64% of the community pharmacies were found to be selling imported herbal medicines [13]. Many studies have been conducted on TM use among the general population, patients and community pharmacies in Nigeria, however, to our knowledge, there has been no published information on the utilization of TM use among pharmacists despite their role in patient care and increasing use of TM in Nigeria. The current study objective is therefore to investigate the prevalence of personal use, views, and experience of TM among pharmacists in Nigeria.

2. Methods

2.1. Study design/population

This was a cross sectional study in the form of an online survey (Google Surveys) conducted over a four-weeks period between April and May 2018. Eligible participants to be included in this study were pharmacists registered and practicing in Nigeria. Participants were excluded in the study if they were on the internship program at the time of the data collection (pharmacists with provisional registration).

2.2. Data collection

Questionnaire development: The items included in the questionnaire were generated from a comprehensive review of existing literature on a similar topic and the following a discussion with pharmacists with clinical and research experience on TM. To ensure face validity, the items in the questionnaire were presented to selected pharmacists with different practice background in pharmacy to ensure clarity of the sentences, wordings and to identify ambiguous and misleading terms. Items in the draft tool were reworded based on the feedback received from the participants. The close-ended questionnaire consisted of two sections: Sections A included items related to sociodemographic data generated based on the practice of pharmacy in Nigeria [14], while section B contained items related to TM; personal use, views, experiences and knowledge of TM use among pharmacists in Nigeria.

Online survey: The questionnaire was designed in the form of an online Google-form [15]. The hyperlink to the survey form was shared with the eligible participants via social media platforms (Facebook and WhatsApp) of practicing pharmacists in Nigeria. The social media groups of the different pharmacists' professional associations were selected based on purposive sampling to represent the six geopolitical zones of Nigeria. In addition, the survey link was also advertised on Facebook pages belonging to pharmacists' professional associations and forums. All access to the online survey form was through a click on the hyperlink where the information about the study and consent was available before proceeding to the actual survey. All the responses were anonymous and the consent to participate in the study was implied by clicking on the survey link. The study did not involve any institution as such ethics approval to conduct the study was not sought from any ethics committee. However, the approval to share the survey link in the social media groups was sought from the group's administrator or the leadership of the professional body.

3. Statistical analysis

Statistical analysis was performed using the IBM Statistical Package for the Social Sciences (SPSS) statistics version 20.0 software. Descriptive data were analyzed using descriptive statistics. The data were presented as frequency and percentage. Chi-Square was used as appropriate to determine the differences among categorical variables. A p-value of 0.05 or less was considered as statistical significance.

3.1. Operational definitions

Traditional Medicinal: The Federal Ministry of Health, Nigeria adopted the World Health Organization's (WHO) definition of TM as the total combination of knowledge and practices, whether explicable or not, used in diagnosing, preventing of eliminating physical, mental or social diseases and which may rely exclusively on past experience and observation handed down from generation to generation, verbally or in writing [1].

4. Results

A total of 262 pharmacists responded to the survey, of which 56.8% were males and 43.2% females. Among the respondents, 53.2% had over five years of pharmacy practice experience and 48% were practicing in the hospital. Table 1 demonstrates the socio-demographic characteristics of the respondents.

Table 1
Sociodemographic characteristics and TM use by pharmacists in Nigeria (n = 262).

Variables	Level	n (%)	Ever used TM n (%)	Currently using TM n (%)	*P value**
Gender	Male	146 (56.8)	127 (57.7)	37 (66.1)	< 0.001
	Female	111 (43.2)	93 (42.3)	19 (33.9)	
Years of experience	< 5	120 (46.7)	103 (46.8)	25 (44.6)	< 0.001
	> 5	137 (53.3)	117 (53.2)	31 (55.4)	
Additional qualification	PhD	14 (5.3)	13 (5.8%)	6 (10.4)	0.976
	MSc	82 (31.3)	81(36.2)	24 (41.4)	
	WAPCP	19 (7.3)	13 (5.8)	2 (3.4)	
	PharmD	6 (2.3)	5 (2.3)	2 (3.4)	
	Professional Diploma	2 (0.8)	3 (1.3)	0	
	Professional certificate	6 (2.3)	3 (1.3)	1 (1.7)	
	None	126 (48.1)	106 (47.3)	23 (39.7)	
Area of practice	Hospital	124 (48.6)	107 (48.8)	16(28.6)	< 0.001
	Community	59 (23.1)	48 (21.9)	16 (28.6)	
	Academia	35 (13.7)	30 (13.7)	9 (16.0)	
	Industrial	12 (4.7)	12 (5.5)	7 (12.5)	
	Administrations	12 (4.7)	12 (5.5)	5 (8.9)	
	NGOs	13 (5.1)	10 (4.6)	3 (5.4)	

NGOs = Non-Governmental organizations, WAPCP = West African Postgraduate College of Pharmacy, * = Chi-square.

5. Utilization, the reason of use and the most commonly used of TM among pharmacists in Nigeria

Of the total 262 respondents, 225 (85.9%) have used TM at least once previously, while 21.3% were currently using TM at the time of the data collection. Those that used TM in the last 12 months were 47.0%, while those that used it within the last one week, one month and six months were 15.4%, 10.5% and 12.8% respectively. The use of TM was common among male (57.7%), pharmacists with more than five years of practice (53.2%), hospital and community pharmacists (48.8%) and (21.9%) respectively [Table 1]. The most common reason for using TM was for the maintenance of general well-being (38.2%), management of disease (49.3%) and disease prevention (9.3%). Herbal medicine was the most frequently used TM among the pharmacists (94.2%). Others included aromatherapy (2.2%), acupuncture (0.9%), massage (0.4) and home remedy (0.4%). One hundred and fifty two (58%) to have a good knowledge of TM, while 98 (37.4%) reported undergoing some forms of training about TM.

6. ADE-related to TM use among pharmacists in Nigeria

Among the TM users, 17.3% have reported experiencing an ADE-related to the use of TM. Of these, 56.4% indicated that the ADE they experienced will change their view about the safety of TM use. A total of 33.2% respondents reported receiving complaints from patients regarding TM-related ADEs in their area of practice. The proportion is higher among males 59 (67.8%), *p-value* 0.001 compared to females.

7. Views regarding the safety of TM use among pharmacists in Nigeria

Among the respondents, 44.7% felt TM is safe for use while 12.6% as unsafe and 39.1% were undecided on the safety of TM. Respondents who felt TM is safe to use were highest among pharmacists practicing in hospital 39 (33.3%), *p-value* < 0.001 compared with other pharmacy practice areas.

8. Recommending of TM use to patients

In the current study, 35.3% of the respondents indicated that they will recommend TM to patients. This was higher among pharmacists practicing in hospitals and community pharmacies having 29.8% and 28.7% respectively.

9. Discussion

To our knowledge, this study is the first to report the use of TM among pharmacists in Nigeria. The findings demonstrated that TM is commonly used by pharmacists in Nigeria. This is in conformity with the current interest and trends of TM use among HCPs in other parts of the world [5–8]. The present study demonstrated that TM is commonly used by the community and hospital pharmacists in Nigeria which is similar to other studies elsewhere in the world [16,17,18]. This signifies an increasing acceptance of TM among healthcare professionals. Herbal medicine was the most commonly TM use among the pharmacists. This is consistent with the commonly used TM used by the majority of population in Nigeria [4], and other part of the world [2].

This study revealed a gross deficiency of TM knowledge among the pharmacists. The community and hospital pharmacists are believed to be the first port of call for prescription refill or seeking medical advice for majority of people in the community. Therefore, such pharmacists should be well equiped with adequate knowledge on TM for optimal provision of pharmaceutical care. This call for more interventions in the form of training, eductaion and campaigns to raise TM knowledge and awareness among the pharmacists. Future studies with adequate funding can focus more on TM knowledge assessment and identifying risk factors associated with the poor knowledge in a large sample size. A few proportion of the TM users self-reported experiencing an ADE from the TM use, and over 50% of them indicated that the ADE they experienced will change their view about the safety of the TM use. This suggested that most pharmacists were concerned by the lack of scientific evidence about the safety of TM use. This observation is in agreement with the findings in existing literature which recognized a lack of understanding of the safety use of TM products as an important inhibiting factor in pharmacists' practice in Australia [19]. Although, TM is integrated into the Nigerian health care system and plays a critical role in improving public health, the theories and different methodos of TM may not be well known by pharmacists who mostly received an education and training of orthodox medicine. Without evidence-based information justifying the safety and efficacy, it is difficult for pharmacists to determine which TM products is effective with less adverse effects. Moreover, as TM and orthodox medicine are based on different philosophies and theories, it can also become a matter of ethical consideration for pharmacists to recommend a combination of therapy when the safety and efficacy are uncertain [20].

The common use of TM among the pharmacists in this study may be a reflection of the role of TM in the Nigerian health system as it is becoming more conspicuous. This is evident by the massive patronage of traditional health care practitioners across the country. These informed the decision for the establishment of the Federal College of Complementary and Alternative Medicine, to train the practitioners of TM [21]. Thus, the need for more training and awareness raising among the pharmacists. The results of our study therefore suggest that extensive information about TM should be adequately provided to the pharmacy students in Schools of Pharmacy as part of their curriculum and should also be incorporated into the Mandatory Continuing Professional Development rograms (MCPD) for practicing pharmacists to be equipped and keep them abreast of the current knowledge in TM. It is reported that pharmacists with previous continuing TM education are more knowledgeable than those without [22]. This was in conformity with the traditional medicine policy which suggests that the TM health care practitioners shall be given appropriate trainng in order to achieve the desired health-related outcome and ensure safety [23].

9.1. Strength and limitations

The present is the first to report the TM use among pharmacists in Nigeria. Knowing the trends of TM use among the pharmacists will provide and fill a gap of knowledge on TM use among HCPs in developing countries. The findings suggest the need for improved training and re-training on TM use to ensure the optimum provision of effective pharmaceutical care. This study employed an online survey that offers low cost, rel-time of access, rapid deployment, short response time, self-administration and more convenient to respondents. Among the limitations of the present study included the small sample size despite the sending reminders. The smaller sample size may affect the generalization of the study findings. Secondly, limitations related to the online nature of the survey which includes. (i) the included sample may not be the true representation of the study population as many potential participants who are not using social media would have been automatically excluded. (ii) low response rate, as many eligible participants would have decided not to participate to avoid the constant bombardment of advertisements and unsolicited surveys from social media. Future studies should consider a bigger sample size to have a more comprehensive information about the TM use among the pharmacists in Nigeria.

10. Conclusion

The use of TM is common among pharmacists in Nigeria, particularly, among those practicing in the community and hospital pharmacies. This signifies an increasing acceptance of TM among healthcare professionals and a call for more education and training on TM for

effective pharmaceutical care delivery.

Conflicts of interest

No conflict of interest associated with this work.

Contribution of authors

We declared that this work was conducted and conducted by the authors named in this article and all liabilities relating to the content of this article will be borne by them. All authors meet the criteria for authorship outlined by the Uniform Requirements for Manuscripts Submitted to Biomedical Journals.

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