



PERCEPTION OF HERBAL MEDICINE PRACTICE AMONG STUDENTS OF TERTIARY INSTITUTIONS IN NORTHERN, NIGERIA



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Abstract: Herbal medicine still plays a significant role in the 21st century specifically in the areas of prevention and treatment of many illnesses. This practice goes beyond the maintenance of good health of the populace as it also protects people from the menace of an evil spirit, boost mental capacity and other human activities. This study survey's the perception and use of herbal medicines among students of tertiary institutions in Northern Nigeria. Purposeful structured questionnaire was used for data gathering. Three hundred and six (306) students were randomly selected and interviewed orally during the study. The results revealed (78.40%) students use herbal medicines and (56.90%) students would still use herbal medicines in the future based on their experience. The findings identified some problems associated with the use of herbal medicines such as; poor hygiene practices, no national herbal medicine safety profiles and standardized dosage regimens, imprecise knowledge on the use of herbal medicines among students. Also, (77.10%) students showed fear about the un-hygienic conditions in herbal medicine preparation and storage processes while (49.0%) students indicated concern on the safety of herbal medicines and (19.00%). The views, opinions, and recommendations on herbal medicines utilizations revealed (43.80%) students recommended national intervention program towards educating herbal practitioners on basic hygienic practices, dosage formulations, and regimens, standardization and safety procedures while (17.60%) students suggested herbal medicine should be banned in Nigeria. This study concluded that students among tertiary institutions in Northern Nigeria have previous knowledge about herbal medicine utilization and its practice.

Keywords: Herbal medicine, tertiary institution, survey, northern Nigeria

Introduction

All cultures have a tie bound traditions of using herbs to promote healing and plants remain the basis for the development of modern drugs. Medicinal plants have been used for many years and in daily life to treat diseases all over the world (Acharya & Shrivastava, 2008). Herbal medicine has received worldwide recognition since medicinal plants continue to play a crucial role in the health care delivery system in urban, semi-urban and rural communities in developing countries (Adodo, 2004; Samuel *et al.*, 2015). According to Azaizeh *et al.* (2003) about 80% of the world population depends on traditional medicine for their health care. In West African countries, about 60% of children with high fever resulting from malaria are given herbal medicine as first-line treatment (Duru *et al.*, 2016). In Nigeria, the use of conventional nutritional supplements and alternative medicine mostly in the form of herbal products is estimated at about 31.9% (Oluwatoyi & Njideka, 2007).

The increased uses of herbal medicine are thought to include accessibility, affordability, perceived safety and therapeutic recommendation potential for treating many diseases (Nworu *et al.*, 2015). Hence, human health becomes the central point of the high use of herbal medicine (Osuchukwu *et al.*, 2017). Self-treating illnesses often use "agbo" and herbal bitters (HB) in Nigeria⁹. Previous studies have reported the use of herbal medicine among Nigerians different socio-economic status (Ezeome & Anarado, 2007; Enwere, 2009; Osemene *et al.*, 2011; Banwat *et al.*, 2015). Student in tertiary institutions has been implicated in self-treating illnesses with prescription and nonprescription drugs including herbal products especially those that have enjoyed increased direct to customers (DTC) advertisement such as herbal supplements and HB (Burak & Damico, 2000). Various studies have been conducted on the knowledge, perception, and utilization of herbal products by students in tertiary institutions (Sekhri *et al.*, 2013; Showande & Amokeodo, 2014; Evans *et al.*, 2015).

However, few studies have been conducted on the knowledge, perception, and use of herbal medicine among students attending tertiary institutions in Northern, Nigeria. Therefore, *this study was aimed to assess the perceived use of herbal medicines among the students of tertiary institutions in Northern Nigeria towards policy-making the decision for regulatory authorities in establishing a comprehensive integrative medicine policy for Nigeria.*

Materials and Methods

Research Study Plan

The study used a survey method in gathering data among students in selected tertiary institutions in northern Nigeria. The instrument used a semi-structured questionnaire in soliciting free responses among respondents. To avoid bias, provision for the names of the respondents were not required.

Study population

A total of 310 respondents were randomly selected across (5) tertiary institutions in Northern Nigeria comprising of 148 males and 158 Females.

Sampling technique and sample size

Purposive sampling technique was used to obtain the number of the respondent needed for the study. A prevalence of 85% based on WHO report was used to determine the sample size required for the study, using the Leslie Kish formula (Bitrus *et al.*, 2016).

$$n = \frac{Z^2 Pq}{L^2}$$

Where: n=sample size; Z=standard normal distribution at 95% confidence interval; P= prevalence of 85% from WHO fact sheet 2005; q = 1-p; L = allowable error

Data collection

Data was collected by distributing the questionnaire among the respondents. Distribution of the questionnaires was by direct sampling. The researchers wrote down the names of all the students selected from different tertiary institutions under

study on separate identical pieces of papers, neatly folded in a hat. Independent individuals were asked to draw one of the pieces of papers representing the schools. Six personnel were enlisted and adequately trained to assist in the distribution of questionnaires.

Data analysis

Responses collected via questionnaires were coded and imputed into a data coding sheet, supplied with a code guide and the codes fed into Microsoft Excel® 2007. The results obtained were presented in form of tables and figures.

Results and Discussion

A total of 306 valid questionnaires out of 310 were recovered and the remaining four were damaged. From the data obtained for the age distribution, the study revealed that the highest percentage of respondent, (52.90%) was observed between the ages of 21-25 years, this is so because a greater proportion of the students' in tertiary institutions of learning are within the ages of 20 – 30 years while the least was 0.3% above 35 years (Table 1). The proportion of male to that of female respondents were 48.40% and 51.60%, respectively (Table 1). States of origin were grouped into geopolitical zones as shown in the Table 1; this was to enable a fair pictorial presentation in the displayed results. The result showed that the north-central zone had the highest percentage (40.2%) of respondents, while south-west zone (6.50%) had the least percentage of respondents. The low representation of the southwest zone (6.50%) could be attributed to the university's location.

Table 1: Socio-demographic information of respondents (n=306)

Variables	Description	Frequency	%
Age (years)	<16	3	1.0
	16-20	83	27.1
	21-25	162	52.9
	26-30	49	16.0
	30-35	8	2.6
	>35	1	0.3
Sex	Male	148	48.4
	Female	158	51.6

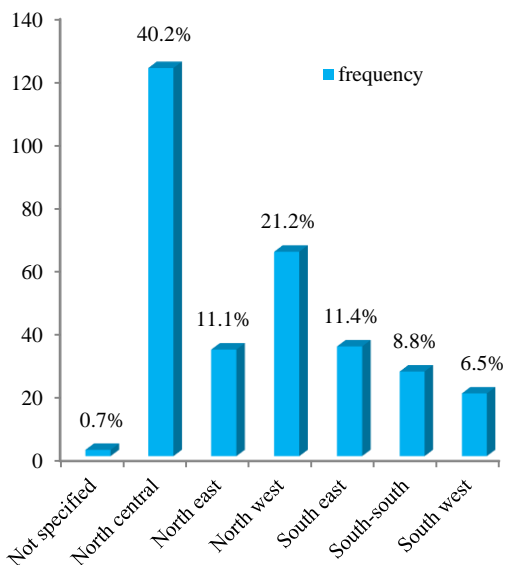


Figure 1: Geopolitical zones of origin of the respondents

The results on the knowledge of herbal medicines revealed that (84.60%) respondents know 'what herbal medicines are'

(Table 2). It was discovered that (82.00%) of the respondents learned about herbal medicines from homes (9.20%) from schools, while (6.20%) was from other sources such as media and friends (Table 2). This is in agreement with the findings of (Nworu *et al.*, 2015; Evans *et al.*, 2015) that reported a significant proportion of the respondents are familiar with herbal therapy. A large proportion of the respondents (82.00%) learned about herbal medicines from homes which is a further prove of the usage of herbal medicine in many African homes and that it's still part of their cultural heritage despite the level of civilization and advancement in health care systems.

In this study (80.10%) respondents believed in the high effectiveness of herbal medicines (5.20%) doubted its effectiveness while (48.70%) suggested that the active ingredients in the herbs were responsible for its effectiveness and (34.00%) associated the effectiveness to prayers and personal beliefs (Table 2). This probably confirmed recognition of supernatural causes of diseases which is at variance with western medicines but has a great influence in the subscription to herbal medicines (Castleman, 2001; Boxin *et al.*, 2003; Bent *et al.*, 2006). Furthermore (78.40%) respondents claimed they use herbal medicine, which they mentioned different disease conditions and herbal medicines used to cure such conditions alongside the method employed; this is in accordance with previous studies (Johnson & Blanchard, 2006; Sekhri *et al.*, 2013; Strgar *et al.*, 2013). However, this proportion contradicted Enwere (2009) that reported low utilization (28.1%) among medical students in Imo State University, Nigeria. While (19.60%) claimed they did not use herbal medicines (Table 2). The high usage of herbal medicine was attributed to the influence of family members as observed in this study, where family members were responsible for (69.60%) usage of herbal medicines. This is in agreement with the results obtained in the previous studies (Strgar *et al.*, 2013; Evan *et al.*, 2015). Only (8.80%) respondents reported that herbal practitioners were responsible for the use of herbal medicine (Fig. 2). A low proportion of the respondents (8.80%) attributed their use of herbal medicines to the influence of herbal medicine practitioners. This could be in form of advertisement on prints and media. Advertisements of some herbal medicine/products on print and electronic media have been shown to influence the use of these products. Direct to the customer (DTC) advertisement of self-medication products appeals to ease of use, psychosocial enhancement, efficacy and safety (Yusuf & Yusuf, 2009).

In Nigeria, the regulation of DTC advertisement of most herbal products is not strict. Peripatetic hawking of these products in commuter buses and marketplaces is common in the country (Yusuf & Sanni, 2011; Showande & Amokeodo, 2014). The use of herbal medicine alongside allopathic medicine was observed in this study with high percentage (47.10%) of the respondents used herbal medicines alone, this is similar to reports from previous studies (Aderibigbe *et al.*, 2013; Ladele & Bisi-Amosun, 2014; Banwat *et al.*, 2015; Duru *et al.*, 2016), while (29.10%) respondents using herbal medicine in combination with allopathic medicines (Table 2). Africans often supplement hospital prescriptions with recommendations from family members and traditional health practitioners in the hope of hastening recovery which may sometimes result in Adverse Drug Reactions (ADR) and cause emergency admissions leading to increase morbidity and mortality (Fakeye *et al.*, 2007). The result showed that (20.30%) respondents experienced unpleasant outcome with the use of herbal medicines such as; nausea, emesis, diarrhoea, blurred vision, sharp stomach pain, constipation, skin irritation, fatigue and headache, while 49.0% did not experience such unpleasant effects (Table 2). Sixteen percent

of the respondents used non-pharmacological measures in managing such unpleasant outcomes, these measures include: stopping the use of the herbal medicines, bed rest, mild exercise, taking much water, and eating before taking the herbal medicine. While 3.9% used pharmacological measures or drugs such as paracetamol, vitamin C, Metronidazole and prescribed medications. Herbal medicines have been shown to interact with synthetic drugs causing toxicity to the patient (Craig & Walter, 2000; Erah, 2002). Hence, herbal medicine should not be used in combination with western medicine unless such combination is medically certified by medical a practitioner. The results obtained revealed (56.90%) respondents would continue to use herbal medicines in the future (Table 2). The effectiveness, cheap and affordability of herbal medicines was attributed to the continued use of herbal medicines by (56.90%) of the respondents. This confirmed that herbal medicines would remain a major part of health care delivery in many societies because of its cost, proven efficacy and tolerability and is a practice that has been indigenous for ages (WHO, 1996; Gbile & Adeshina, 1998; Goldman, 2001; Huffman, 2003).

Table 2: Perception of herbal medicine practice among respondents

Variable	Frequency	%
Knowledge of herbal medicines		
Not specified	21	6.9
Yes	259	84.6
No	26	8.5
Source of first knowledge of herbal medicines		
Not specified	8	2.6
Home	251	82.0
School	28	9.2
Others (medial, friends etc)	19	6.2
Use of herbal medicines		
Not specified	6	2.0
Yes	240	78.4
No	60	19.6
Belief in the "effectiveness" of herbal medicines		
Not specified	9	2.9
Yes	16	5.2
No	245	80.1
Not sure	36	11.8
The basis of belief in the "effectiveness" of herbal medicines		
Not specified	53	17.3
Active ingredients	149	48.7
Prayers/beliefs	104	34.0
Use of herbal medicines alone or in combination with western medicines		
Not specified	38	12.4
Herbal medicines alone	144	47.1
Combination	89	29.1
Orthodox medicines alone	35	11.4
Unpleasant effects experienced with the use of herbal medicines		
Not specified	94	30.7
Yes	62	20.3
No	150	49.0
Future use of herbal medicines		
Not specified	77	25.1
Yes	174	56.9
No	55	18.0

However, (18.00%) claimed that they would not use it in the future. A total of (77.10%) respondents showed concern over the un-hygienic conditions of the herbal medicines while (6.90%) were not bothered. Lack of dosage regiments was a source of concern for (62.10%) and suggested that standard dosage profiles should be introduced to herbal practitioners. Although, (21.60%) respondents claimed that its' been used for ages without harmful effects and were not bothered with the lack of doses. Also, the results obtained revealed that

(49.0%) respondents believe that herbal medicines are relatively safe, while (14.70%) doubted its safety, although (28.80%) were not sure if herbal medicines are safe to use. Nineteen percent (19.0%) of the respondents were satisfied with the level of education of herbal practitioners while (72.5%) suggested that herbal practitioners should be adequately trained, educated and licensed. Furthermore, (27.80%) respondents suggested science-based evaluation studies that relate to efficacy, safety and standard dosage profiles of herbal medicine should be in place and (17.60%) suggested that evaluation studies to be introduced into herbal medicines, while (9.80%) were of the view that a national committee to be set up to investigate, evaluate and regulate the use of herbal medicines.

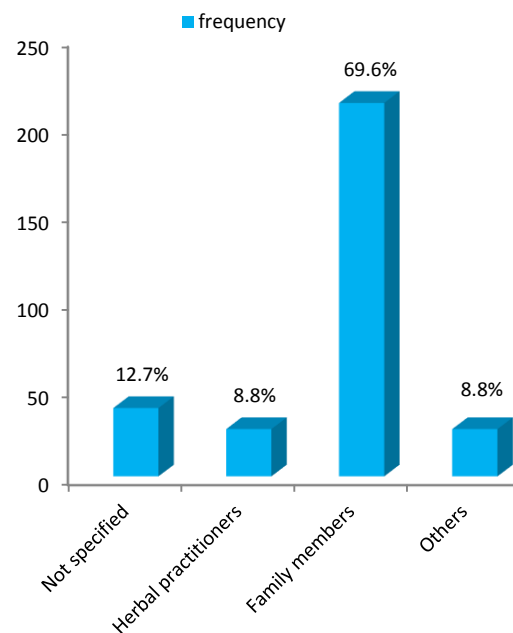


Fig. 2: Source of knowledge on the "use of herbal medicines" as a method of treatment

Conclusion

This study revealed that students in Northern Nigeria tertiary institutions have relative degree knowledge of herbal medicines and positive attitude towards herbal medicine practice. However, there was no scientific evidence as to the use of these herbal medicines and its associated side effects. Hence, there is a need to enlighten the students about the use of herbal products and provide varieties of cautions in their tertiary institution's prospectus handbook on the adverse effect of self-medication and drug reactions associated with herbal products.

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