

PERCEPTION OF THE KNOWLEDGE OF TRADITIONAL AND HERBAL MEDICINE AMONG STUDENTS IN THE COLLEGE OF MEDICINE, UNIVERSITY OF ILORIN, NIGERIA

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ABSTRACT

The practice of traditional medicine in Nigeria is widely acceptable and contributes significantly to healthcare delivery, yet, integration and/or co-recognition with orthodox medicine is still faced with a lot of challenges. One of the most recommended ways of addressing these challenges include enlightenment on the practice of traditional medicine and opportunities available for the general populace. This study presents a survey of the perception of the knowledge of traditional and herbal medicine among medical and nursing students in the College of Medicine, University of Ilorin, Ilorin, Nigeria. A total of 159 students were selected for the survey from 200 to 500 level of medical students and nursing students of the College of medicine of the University using a semi structured questionnaire and informal conversation on the respondents. A total of 98 medical students and 61 nursing students consisting of 39% male and 61% female. Ninety-two percent of the respondents have had contact with traditional and herbal medicine although level of interest is 39% low, 49% medium and just 12% high. Majority of the respondents (87%) prefer modern medicine and only 8% prefer herbal medicine. 60% of the respondents will like to take a course in traditional/herbal medicine, but only 9% will actually like to practice traditional medicine. Although majority of the respondents have no knowledge of traditional/herbal medicine, but they are willing to understand the practice. There is therefore need for the incorporation of traditional and herbal medicine into college of medicine curriculum.

INTRODUCTION

Traditional medicine, also referred to as ethno-medicine, folk medicine, native healing, or complementary and alternative medicine (CAM) is the oldest form of health care system [1]. According to the WHO, it is defined as the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness [2]. Herbal medicines, on the other hand, include herbs, herbal materials, herbal preparations and finished herbal products that contain as active ingredients parts of plants, or other plant materials, or combinations [2]. It has been estimated that 80% of the world population uses medicinal plants in health care [3]. Historically, evidence exists around the world to show that the use of folk beliefs and knowledge has led to the discovery and isolation of pharmacologically active compound [4]. Currently, the worldwide use of herbal medicines for management of various ailments has been on the increase in both the developed and the developing world [5].

In developed countries such as the United States of America, herbal products have seen an increasing level of use by approximately 20% of the population [6]. Anxiety about the adverse effects of chemical drugs, improved access to health information, changing values and reduced tolerance of paternalism are some of the factors responsible for the growing demand for complementary and alternative medicine in developed countries [1]. Also, over 80% of people living in developing countries have been reported to be highly dependent on herbal medicines as their immediate choice in the treatment of diseases [7]. This dependence may be due to the ease of accessibility, affordability, availability and acceptability [8]. Although, contrary to the tag of

'safety' and the profound therapeutic benefits of some medicinal plants, several side effects have been reported following the use of herbal products such as toxicity, carcinogenicity, mutagenicity and teratogenicity [6, 9].

The new health agenda in Nigeria and many African countries focuses on the institutionalization of traditional medicine which is to recognize the practice of traditional medicine and its incorporation into its healthcare system, as effective healthcare cannot be achieved in Africa by orthodox medicine alone [10]. In Nigeria, the usage of plants, plant extracts or plant-derived chemicals to treat diseases has become a therapeutic modality which has stood the test of time. In fact, many reports have suggested the integration of traditional medicine system into the mainstream of healthcare services [11, 12]. This would improve health care by the enhancement of quality of care and supply of low-cost primary health care [14].

Various studies been conducted on the evaluation of the knowledge of traditional and herbal medicine amongst students [14, 15], more emphasis needs to be laid on the integration of traditional medicine into the curriculum in the college of medicine. This study aimed to assess the perspective of medical and nursing students to herbal and traditional medicine and to implore possible integration of Nigerian traditional medicine into college of medicine curriculum.

RESULTS AND DISCUSSION

Demography

This result shows that the female students has the higher population at 61%, although the population distribution shows

that the males were more among the medical students (54%) while the females were more among the nursing students (85%). Age range of 16-25 was the most prevalent (84%) and majority of the respondents belong to the Yoruba ethnic group (See Table 1).

Contact with herbal/traditional medicines

Majority of the respondents (92%) have had contact with traditional and herbal medicine although 38% showed low, 50% showed medium and 12% showed high level of interests respectively. Stimulation of interest was majorly through parents at 40%. This study also revealed that mothers were the highest custodian of knowledge (31%) on medicinal plants in the family, followed closely by fathers at 28%. The acquisition of knowledge of traditional and herbal medicine from parents or grandparents has been reported in other studies [15]. Some of the respondents (62%) could identify the plants growing around them for collection, and only 47% of the respondents can prepare the plants for use. However, 38% of the respondents have previously been involved in self-prescription or medication (See Table 2).

Preference of medicine (Orthodox medicine versus Traditional medicine)

The survey revealed that majority (87%) of the respondents prefer orthodox medicine to traditional/herbal medicine (9%). Base on the questionnaire, the most reason given by the respondents on why they preferred orthodox medicine were: suitable dosage formulation (35%), research and scientific-based (27%), effectiveness (21%). Previous studies have reported the high preference of orthodox medicine to traditional/herbal medicine [16, 17]. However, (13%) of the respondents preferred traditional medicine to orthodox medicine. Reasons given were accessibility (38%) and because it is obtained from natural sources (31%). More than half (59%) of the respondents will like to take a course in

traditional/herbal medicine, but only 9% will actually like to practice traditional medicine. Interestingly, 69% of respondents actually support the integration of traditional medicine into the curriculum in the college of medicine (See Table 3).

The result of this study support the need for integration of traditional medicine into the curriculum of medical schools as it will stimulate the interest of students in the opportunities available in traditional and herbal medicine. However, some respondents believe no integration is necessary as the curriculum is already “too crowded” and cumbersome to study.

Medicinal Plant Species, Parts used and Disease Indicated

The survey revealed that thirty-eight medicinal plant species were mentioned, with *Azadirachta indica* being the most cited followed by *Moringa oliefera* and *Aloe vera* (See Table 4). The plant species mentioned were categorized into twenty-seven families with Rutaceae having the highest percentage of plant species followed by Poaceae family. Majority of the medicinal plants parts used were obtained from leaves (58.82%), followed by bark (12.75%), then fruit (8.82%) (See figure 1). The least used medicinal plant parts include whole plant, rhizome and shaft (0.98%). Leaves have been reported to be the most commonly used plant parts by traditional medicine practitioners, and is in fact, the main site of synthesis of secondary metabolites in plants [18, 19]. This survey also revealed that malaria was the most frequently mentioned disease, followed by diarrhea/pile. Other diseases indicated include typhoid, blood pressure (BP) lowering, skin diseases, cough infections, peptic ulcer and cancer amongst others (See table 4). Malaria however has been reported as the world’s most important parasitic disease and its occurrence in Nigeria, accounts for a quarter of all cases in the Sub-saharan Africa [20].

Table 1: Demographic information of study population

	MEDICINE	NURSING	TOTAL	
			Frequency	Percentage (%)
GENDER				
Male	53	9	62	39
Female	45	52	97	61
AGE RANGE				
16 – 25	85	48	133	84
26 – 35	10	11	21	13
> 36	3	2	5	3
ETHNIC GROUP				
Yoruba	80	51	131	83
Hausa	1	1	2	1
Igbo	0	2	2	1
Others	17	7	24	15

Table 2: Contact with herbal/traditional medicines

	MEDICINE	NURSING	TOTAL	
			Frequency	Percentage (%)
CONTACT WITH HERBS				
Yes	93	53	146	92
No	5	8	13	8
STIMULATION OF INTEREST				
Parents	34	30	64	41
Grandparents	15	5	20	13
Self	9	4	13	8
Relatives	3	4	7	4
Friends	5	2	7	4
Teachers	6	4	10	6
Others	8	3	11	7
None	18	9	27	17
LEVEL OF INTEREST				
Low	36	25	61	38
Medium	48	31	79	50
High	14	5	19	12
NO OF TIMES HERBS HAVE BEEN TAKEN				
Few	43	25	68	43
Numerous	42	27	69	43
Never	13	9	22	14
LEVEL OF SATISFACTION				
Low	47	35	82	53
High	28	19	47	30
None	23	7	30	19
BEST KNOWLEDGE OF MEDICINAL PLANTS				
Mother	28	20	48	30
Father	24	20	44	28
Grandparents	25	8	33	21
Others	12	11	23	14
None	9	2	11	7
KNOWLEDGE OF USES OF PLANTS				
Yes	70	44	114	72
No	25	15	40	25
None	3	2	5	3
CULTIVATION AROUND THE HOME				
Yes	80	58	138	87
No	12	9	21	13
PLANT IDENTIFICATION FOR COLLECTION				
Yes	62	36	98	62
No	25	20	45	28
None	11	5	16	10
SELF TREATMENT/PRESCRIPTION				
Yes	36	24	60	38
No	58	33	91	57
None	4	4	8	5

Table 3: Preference of medicine (Orthodox versus Traditional medicine)

	MEDICINE	NURSING	TOTAL	
			Frequency	Percentage (%)
PREFERENCE				
Herbal Medicine	10	3	13	8
Orthodox Medicine	85	53	138	87
Both	2	3	5	3
None	1	2	3	2
REASON: ORTHODOX MEDICINE				
Effectiveness	23	14	37	27
Research / Scientific-based	18	11	29	21
Doses and Dosage forms	29	19	48	35
Others	15	9	24	17
REASON: HERBAL MEDICINE				
Effectiveness	2	1	3	23
Naturality and Safety	3	1	4	31
Affordability and Accessibility	3	2	5	38
Others	1	0	1	8
COURSE ON HERBAL MEDICINE				
Yes	54	40	94	59
No	39	19	58	36
None	5	2	7	5
PRACTICE OF TRADITIONAL MEDICINE				
Yes	5	9	14	9
No	93	52	145	91
INCORPORATING TRADITIONAL MEDICINE				
Yes	65	45	110	69
No	26	12	38	24
None	7	4	11	7

Table 4: Medicinal plants and their frequencies

SCIENTIFIC NAME	FAMILY	COMMON NAME	MAIN INDICATION	FREQUENCY
<i>Allium cepa</i> L.	Alliaceae	Onion	General wellbeing	2
<i>Allium sativum</i> L.	Alliaceae	Garlic	General wellbeing	2
<i>Aloe vera</i> (L.) Burm.f	Aloaceae	Aloe	Skin diseases	10
<i>Anacardium occidentale</i> L.	Anacardiaceae	Cashew	Malaria	2
<i>Aristolochia ringens</i> Vahl	Aristolochiaceae	Dutchman's pipe	Diarrhoea/Pile	1
<i>Azadirachta indica</i> A. Juss	Meliaceae	Neem	Malaria	24
<i>Bambusa vulgaris</i> Schrad. ex J.C. Wendl.	Poaceae	Bamboo	Malaria	1
<i>Bucchozia coricea</i>	Capparaceae	Wonder kola	B.P lowering	1
<i>Cannabis sativa</i> L.	Cannabaceae	Hemp	Stimulant	1
<i>Carica papaya</i> L.	Caricaceae	Pawpaw	Malaria, Ulcer	9
<i>Catharanthus roseus</i> (L.) G. Don.	Apocynaceae	Periwinkle	Cancer	1
<i>Citrus aurantifolia</i> Burn.f.	Rutaceae	Lime	General wellbeing	1
<i>Cocos nucifera</i> L.	Arecaceae	Coconut	Thyphoid	1
<i>Costus afer</i> Ker-Gawl	Costaceae	Ginger lily	Antioxidant	1
<i>Cymbopogon citratus</i> DC Stapf.	Poaceae	Lemon grass	Malaria	3
<i>Elaeis guineensis</i> Jacq.	Arecaceae	Palm tree	Measles	2
<i>Epimedium grandiflorum</i> L.	Berberidaceae	Goat weed	Malaria	2
<i>Garcinia kola</i> Heckel	Clusiaceae	Bitter cola	General wellbeing	2
<i>Gossypium arboreum</i> L.	Malvaceae	Cotton plant	Thyphoid	3
<i>Helianthus annuus</i> L.	Asteraceae	Sun flower	Malaria	2
<i>Jatropha curcas</i> L.	Euphorbiaceae	Physic nut	Thyphoid, cough	2
<i>Mangifera indica</i> L.	Anacardiaceae	Mango	Malaria	9
<i>Momordica charantia</i> L.	Curcubitaceae	Bitter melon	Malaria	2
<i>Morinda lucida</i> Benth.	Rubiaceae	Brimstone tree	Malaria	1
<i>Moringa oleifera</i> L.	Moringaceae	Moringa	General wellbeing	17
<i>Muraya koenigii</i> Spreng.	Rutaceae	Curry leaf	Diarrhoea/Pile	1
<i>Nicotiana tabacum</i> L.	Solanaceae	Tobacco	Digestion	2
<i>Ocimum gratissimum</i> L.	Lamiaceae	Scent leaf	Diarrhoea/Pile	11
<i>Psidium guajava</i> L.	Rutaceae	Gauva	Thyphoid	1
<i>Sauropus androgynous</i> (L.) Merr.	Phyllantaceae	Sweet leaf	Headache	2
<i>Sorghum bicolor</i> (L.) Moench	Poaceae	Guinea corn	Blood Tonic	1
<i>Stellaria media</i> L.	Carophyllaceae	Chick weed	Malaria, Cough	2
<i>Talinum triangulare</i> (Jacq.) Willd.	Portulacaceae	Water leaf	Labour induction	2
<i>Telfairia occidentalis</i> Hook. F	Cucurbitaceae	Fluted pumpkin	Blood Tonic, Diabetes	9
<i>Vernonia amygdalina</i> Delile	Asteraceae	Bitter leaf	Malaria, Digestion	7
<i>Zanthoxylum zanthoxyloides</i> Lam.	Rutaceae	Fagara	Digestion	1
<i>Zingiber officinale</i> Roscoe	Zingiberaceae	Ginger	General wellbeing	3

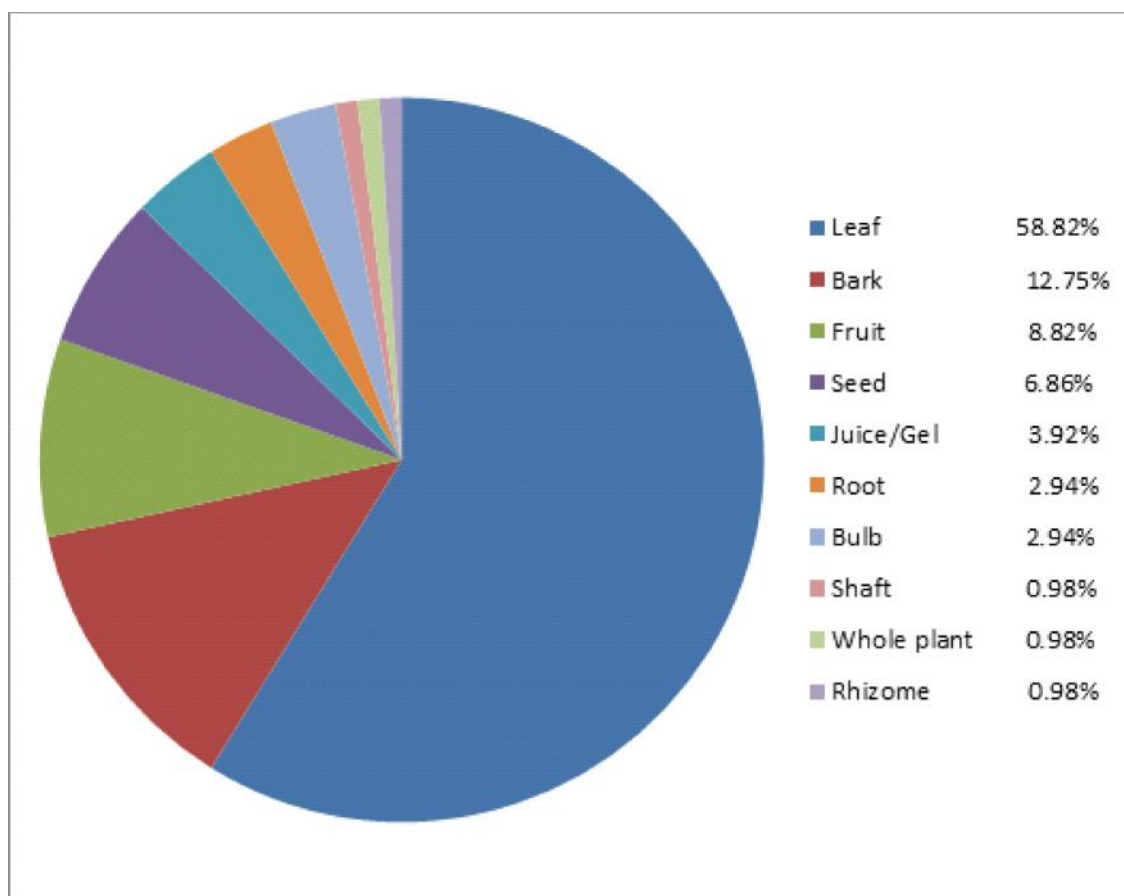


Figure 1: Pie chart showing plant parts usage in percentage

CONCLUSION

This study revealed that majority of the study population exhibited a positive perception to herbal and traditional medicine. This is important in influencing their decisions in the safe and efficient management of ailments and also, minimizes their resistance to the integration of traditional and herbal medicine into the curriculum and into the healthcare system.

MATERIALS AND METHODS

Description of Study Area

The study was carried out at University of Ilorin Teaching Hospital (UITH), Ilorin, Nigeria, which is a tertiary healthcare Institution by law in 1980. The UITH is located at Oke-Oyi community, Ilorin East Local Government Area, Kwara state, Nigeria. Ilorin East is one of the sixteen local government area of Kwara State and it shares boundary with Ilorin South, Ilorin West, Moro and Ifelodun local government areas. The local government area is located between latitude 8 degree 5N and longitude 4 degree E, and it is situated in the transitional zone between the Northern and Southern parts of Nigeria. It has an area of 486km² and has an estimated population of 204,310 at the 2006 census.

Data Collection

The survey was conducted using semi-structured questionnaires to conduct the interviews among medical students and nursing students in the College of medicine, UITH. The respondents were selected according to the modified methods of [21].

The questionnaires had two components: Demography and Perspective to Traditional and Herbal Medicines (T/HM). Basic questions like contact with T/HM, level and stimulation of interest, contribution of T/HM to healthcare delivery in Nigeria, drugs derived from medicinal plants, preference between T/HM and orthodox medicine with reasons and support of the incorporation of T/HM into the curriculum in the College of Medicine. The results of the questionnaires were used to make necessary modifications and corrections on the questionnaires and interview guides. The contents of the semi-structured questionnaires were organized using a standard protocol [22] and data were analyzed using descriptive statistics such as frequency and percentages.

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