

# Utilization of Alternative Medical Services In An Urban Centre Of North Central Nigeria

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## ABSTRACT

**Background:** The use of alternative therapy is becoming more popular in the recent times especially due to the increasing cost, distrust and limitations of modern western medical care. There is a universal trend toward naturalness and herbal medicine is now being modernized and being accepted by people who would not have used them. This community based study seeks to assess the prevalence, pattern, behaviour and determinants of Alternative Therapy (AT) use.

**Methods:** It was a cross-sectional descriptive survey among adults in the Ilorin city of Nigeria. Participants were selected by multistage sampling and information obtained by the use of semi-structured questionnaire.

**Results:** Total prevalence of AT use was 67.7% while the prevalence of the use of both indigenous and foreign AT use was 44.8% and 30.4% respectively. Among indigenous AT users, 87.5% will use both conventional and modernized type, while 12.5% will use only the modernized type. More than 10% were new users of AT. Respondents use AT for promotive, preventive and curative purposes. Only 3.5% were considered as safe users according to 12-point items. The male respondents and the never married ones practice a safer use of alternative therapy ( $p < 0.05$ ). Similarly, the respondents with higher educational status also have a safer practice of AT use ( $p < 0.05$ ).

**Conclusion:** There is high prevalence of unsafe AT use in Ilorin. The regulation of advertisement and sales of harmful herbal medicines should be intensified by NAFDAC and other related agencies. Further research into the safe and effective integration of AT into modern healthcare practice in Nigeria is also recommended.

**Key Words:** Alternative therapy; Utilization; Medical services; Nigeria.

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## INTRODUCTION

Traditional medicine is often referred to as complementary therapy when used in combination with orthodox medicine, and alternative therapy (AT) when used in place of orthodox medicine<sup>1,2</sup>. The use of alternative therapy has become more popular in both developed and developing countries in the recent times<sup>3-6</sup>. The increasing cost and distrust of modern western medical care in recent years has

promoted the use of alternative and traditional therapies and has attracted the interest of health professionals, researchers, governments and policy makers<sup>6,7</sup>. The use has not been limited to resource-poor settings alone but also among the elites<sup>8</sup> and claims and refutations by various individuals and professional groups of cure for chronic ailments with AT has been reported<sup>9</sup>. Furthermore, inadequate access to modern healthcare services<sup>10</sup>, and a trend towards naturalness<sup>6,11</sup> have strengthened the shift to AT. However, naturally occurring substances have also been found to be toxic and hazardous<sup>5,12,13</sup> due to factors such as adulteration; poor dose standardization; use of wrong species of plants and drug interaction<sup>5</sup>. The unregulated or inappropriate use of AT has also been documented to have negative effects on its users<sup>9,14,15</sup>.

Currently there are efforts to modernize the practice of AT and AT drugs in order to make them more acceptable especially to the elite and literate populations. Due to this modernization, herbal drugs are conveniently sold alongside orthodox medicine by pharmacists<sup>16</sup>. Unlike modern medicines which are so regulated that there are drugs which can only be purchased with doctors prescriptions, AT medications are not so regulated in most countries. The advertising strategies especially using vehicles with megaphone from one neighbourhood to another which do not necessarily inform but persuade customers have also made the use more popular<sup>17</sup>.

While National Agency for Food and Drug Administration (NAFDAC) was established to regulate drug manufacture and sales, the publicity from the manufacturers of herbal drugs of NAFDAC approval for their products indicates the need for more regulation of these drugs by NAFDAC. It is on this background that this study seeks to assess the pattern, behaviour and determinants of safe use of alternative therapy among the study population.

## MATERIALS AND METHODS

### Study Design and Population

This cross-sectional descriptive study was carried out in Ilorin metropolis, the capital of Kwara state in the North Central geopolitical zone of Nigeria from March 2007 to June 2008. The study population consisted of male and female adults aged 18 years and above resident in Ilorin. People in transit and medical professionals were excluded from the study.

### Sample and Sampling Technique

A total of 500 subjects were selected by multi-stage sampling technique of twenty major streets as enumeration

areas. Ten of the streets were in the outer core which inhabits mostly non-indigenes and of high socio-economic class, while the other ten were from the inner-core consisting of mostly indigenes and of a relatively lower socio-economic class. Every fifth house or shop was then selected on each street by systematic sampling. A maximum of two adults ( $\geq 18$  years), one male and one female were then interviewed in each house or shop otherwise only one, male or female if there was only one adult in the house so as to have a wide coverage. The study questionnaire was administered to twenty-five respondents on each street.

### Instruments for data collection

Instruments for data collection were a semi-structured questionnaire consisting of both close-ended and open-ended questions, mostly interviewer-administered, but few were self administered. The questionnaire which consists of a list of common items used in herbal preparation was used to obtain information concerning their utilization from the respondents. In addition, a pre-test carried out was used to fill in some other medicines.

AT in this study included self preparation of herbs but did not include spiritual materials such as incantations, yoga, meditations, acupuncture, faith healings and holy water.

### Data Analysis

Data were collected by trained assistants. Data were analysed using SPSS version 11. Frequency distributions and determinants by Chi square analysis were done. The level of significance was set at  $p = 0.05$ . There were 12 listed queries from the users to enlist them as safe or unsafe users of herbal drugs. An acceptable response indicating safe use was scored 1, while an unacceptable response was scored 0. A total score of 0 (zero) was considered as a safe use while a score of 1-6 was considered slightly unsafe use and a score of 7-12 considered extremely unsafe use.

### RESULTS

Out of the 500 questionnaires which were administered, 464 were adequately filled and fit for analysis giving a response rate of 92.8%.

#### Socio-demographic Data

The respondent's age ranged from 18 to 60 with the mean age of the respondents being  $28.2 \pm 10.0$  years. The male: female ratio was 1.2: 1. The majority of subjects were singles constituting 304(65.5%). Four hundred and ten representing 88.3% of the respondents had at least secondary level education. Students and the professionals who constituted the major occupations were 139(30.0%) and 221 (47.6%) respectively. [Table 1]

#### Utilization of Alternative Therapy

All the 464 respondents reported utilization of the modern health care services however, 312 (67.2%) of them currently use one form of AT or the other. Ninety subjects, representing 19.4% of the respondents will first consult AT before modern healthcare services. Of all the respondents, 208 (44.8%) used the indigenous (Nigerian) AT while 141 (30.4%) used the imported (foreign) AT. While 37 of the respondents used both forms, 171 used only the indigenous and 104 used only foreign AT. The respondents' reasons for the use of AT were

its easy accessibility, belief in its effectiveness and a preference for natural preparations. Sixty eight (21.8%) of the respondents reported a perception that AT was better than the orthodox therapy.

Majority of the respondents reported patronage of chemist, pharmaceutical shops and trade fairs to purchase their AT drugs. Only a few reported purchase of their drugs from various types of hawkers, herbalists' homes and AT practitioner clinics.

Various reasons (Table3) were adduced for the increasing utilisation of AT by the respondents and include aggressive marketing strategy and modernized packaging. Food and vitamin supplementation were the most common reason for which respondents took AT. Alternative therapy was used for promotive, preventive and curative purposes by the respondents. Out of 182 respondents' who had children, 147 (80.8%) used herbal drugs for their children's various illness such as febrile illness, febrile convulsion, teething problems, and diarrhoea diseases.

#### Safety of AT Use by Respondents

Out of the 312 users of AT, 179 (57.4%) used self prepared or purchased AT medication for self-medication. The following proportion of respondents 71.8%, 78.5% and 84.9% used AT drugs without manufactures' label, expiry date and NAFDAC registration numbers respectively.

Most of the respondents knew that herbal AT drugs were supposed to be NAFDAC registered as an indication of safety, and effectiveness for acclaimed ailments. However a large proportion of subjects still used unregistered herbal products. A high proportion, 210 (67.3%) were aware that herbal AT drugs can be toxic, but only 52 (24.8%) of these reported previous side effects out of which only 15 (28.8%) sought medical intervention, while the others still used herbal AT drugs for the observed adverse effects. Overall, only 11 (3.5%) of the respondents were considered as safe users of AT, 137 (43.9%) as slightly unsafe users and 164 (52.6%) as extremely unsafe users of AT.

#### Socio-demographic determinants of safety use of AT

Gender did not affect respondents' uptake in the utilization of AT however, the married subjects were found to have higher use. Education and occupation also had statistically significant correlation with the acceptance of AT use. The male respondents practiced safer use of AT than their female counterparts ( $p=0.0008$ ). There was a safer use of AT among the never married respondents compared with current and previously married subjects ( $p=0.0068$ ). Subjects with higher educational status, had safer use of AT among the respondents ( $p=0.0005$ ).

### DISCUSSION

This study described the pattern of AT utilization among the target population, their behaviour and safety of practice regarding AT. The use of AT in 67.2% of respondents is in keeping with expectations of a typical African country<sup>7,9</sup>. Despite the high utilization of AT among the respondents, the fact that they still used one form of modern healthcare service or the other via hospitals or chemist shops is similar to the findings of other studies which have shown that those

**TABLE 1: Socio-demographic Characteristics of Respondents (N = 464)**

VARIABLE	Freq	%
<b>Age</b>		
18 20	116	25.0
21 30	224	48.3
31 40	67	14.4
41 50	30	6.5
51 60	26	5.6
<b>Sex</b>		
Male	252	54.3
Female	212	45.7
<b>Marital Status</b>		
Married	152	32.8
Never Married	304	65.5
Divorced/Seperated	8	1.7
<b>Educational Status</b>		
None	25	5.4
Primary	29	6.3
Secondary	304	65.5
Tertiary	106	22.8
<b>Occupation</b>		
Unemployed	13	2.8
Students	139	30.0
Artisan	21	4.5
Trading and farming	70	15.1
Civil Servants/Professionals	221	47.6

\* Single response

\*\* Multiple responses

**Table 3: Utilization of AT among the Respondents**

Variables	Freq	%
Made accessible and acceptable	316	68.1
The media jingle/advert	397	85.6
The public marketing strategies -	452	97.4
Modernize Packaging	429	92.5
Approval by NAFDAC	340	73.3
<b>Promotive and Preventive AT ever used by respondents (n=311)</b>		
General wellness and mental fitness	296	94.9
Vitamin/Mineral supplement	290	92.9
Sexual enhancing /stimulants	46	14.7
Fertility ability	44	14.1
Jedi -jedi prevention	266	85.3
Regular bowel movement	154	49.3
Toiletries and cosmetics	284	91.0
<b>Curative AT ever used by r espondents</b>		
Infertility/Impotence/Low sperm count	17	5.4
Diabetes/High Blood Pressure	16	5.1
Malaria/Typhoid	244	78.2
STIs	42	13.5
General aches/Malaise	288	92.3
Body rashes and skin diseases	106	34.0
Jedi -jedi /Peri-anal conditions	217	69.6
Back-pain/Arthritis	89	28.5
Worm infestation	68	21.8
Reduce weight / Control obesity	125	40.0
Convulsion and epilepsy	4	1.3
Insomnia	105	33.7

**Table 4: Distribution of Respondents' Safety Practices Concerning Herbal Products**

Variables	Freq	%	Rem
<b>Usual Place of Purchase</b>			
Street hawkers/touts/Hawkers in commercial bus	176	56.4	U
Drug vendors with loud speakers on cars	145	46.5	U
Open local market sellers	165	52.9	U
Special/Certain product marketers/suppliers	212	67.9	RS
Traditional herbalist home/AT practitioners office/dinic	208	66.7	RS
Chemist/Pharmaceutical shop/Supermarkets	284	91.0	RS
<b>Practices</b>			
Normally/Sometimes use selfmedication of herbal products	179	57.4	U
Normally/Sometimes use drugs notregistered by NAFDAC	265	84.9	U
Normally/Sometimes use herbs drugs for children (n=182)	147	80.8	U
Has ever used herbs when pregnant / breastfeeding	42	13.5	U
Normally/Sometimes use drugs without confirming the expiry date	245	78.5	U
Has ever used drugs for curing any of listed diseases***	86	27.6	U
<b>Summary of Safety Practices</b>			
Safe User	11	3.5	
Slightly unsafe user	137	43.9	
Extremely unsafe user	164	52.6	

\*\*\* "Herbal medicines and Related Products Advertisement Regulations 2004" produced by NAFDAC available at [www.nafdac.org](http://www.nafdac.org) accessed on 24th March, 2010

Rem=Remarks; U=Unsafe; RS=Relatively Safe

**Table 5: Distribution of Selected Socio-Demographic Data of Respondents by Use of Alternative Therapy**

Variables	Utilization of AT			p-value
	Yes	No	Total	
<b>Sex</b>				
Male	174(69.0)	78(31.0)	252	P=0.3661
Female	138(65.1)	74(34.9)	212	X <sup>2</sup> =0.82
<b>Marital Status</b>				
Ever Married	122(76.2)	38(23.8)	160	P=0.0027
Never Married	190(62.5)	114(37.5)	304	X <sup>2</sup> =9.0
<b>Educational Status</b>				
None	19(76.0)	6(24.0)	25	
Primary	21(72.4)	8(27.6)	29	P=0.0019
Secondary	217(71.4)	87(28.6)	304	X <sup>2</sup> =14.93
Tertiary	55(51.9)	51(48.1)	106	
<b>Occupation</b>				
Unemployed	8 (61.5)	5(38.5)	13	
Students	64 (46.0)	75(54.0)	139	P= 0.0000
Artisans	17 (80.9)	4(19.0)	21	X <sup>2</sup> = 45.44
Trading/Farming	60 (85.7)	10(1.3)	70	
Professionals	163 (73.8)	58(26.2)	221	
	312	152	464	

**Table 6: Distribution of Selected Socio-Demographic Data of Respondents by Safety use of Alternative Therapy**

Variables	Safe (%)	Slightly Unsafe	Extremely Unsafe	Total	p-value
<b>Sex</b>					
Male	8(4.6)	91(52.3)	75(43.1)	174	P= 0.0008
Female	3(2.2)	46(33.3)	89(64.5)	138	
<b>Marital Status</b>					
Ever Married	4(3.3)	67(54.9)	51(41.8)	122	P = 0.0068
Never Married	7(3.7)	70(36.8)	113(59.5)	190	
<b>Educational Status</b>					
Not up to	2(5.0)	14(35.0)	24(60.0)	40	
Secondary	2(0.9)	102(47.0)	113(52.1)	217	P= 0.0005
Secondary	7(12.7)	21(38.2)	27(49.1)	55	
Tertiary					
	11	137	164	312	

who use AT are not opposed to the use of orthodox medicine but rather see it as complementary<sup>2,18</sup>. People generally have the idea that the intermix of modern and traditional healthcare is more effective and this study like some others also reported the assumed perception that combination of orthodox and traditional medicine is better than either alone<sup>2,18-21</sup>.

Adverse effects have been known to determine compliance to medications whether orthodox or traditional,<sup>9,13,16</sup>. The results of this study also demonstrated that whereas 73% of non-users do not take AT because of fear of side effects and 23.1% of previous users stopped as a result of adverse effects (Table 2), some however continued the use in spite of the adverse effects which may be detrimental to their well being. Aside of the adverse effects, the elites and educated members of the society sometimes portray the presentation of the AT drugs as awkward and old-fashioned. But of late, the traditional products began to wear a new look (by way of packaging, advertisement, registration and recognition by government) to compete well in the market and this is part of what brought about its popularity and receipt especially among those who ordinarily would not have used them. This increased acceptance and use of traditional medicines in the recent times which is partly due to their being modernized<sup>11,12</sup> is also reflected in this study as evidenced by new users and possible future users among the respondents (Table 2 and 3). Notwithstanding, the modernization has also demonstrated a misinterpretation, by users, of NAFDAC registration of herbal drugs as approval of their efficacy which is not necessarily so as observed in a previous report<sup>21</sup>. The limitations of modern therapy, which led to distrust by patients, especially the chronic non-communicable diseases have being used as advantages by herbal medicines manufactures, marketers and advertisers to confuse and deceive the unsuspecting public<sup>14,15,17,21</sup>. It has been suggested<sup>22</sup> that the policy makers ought to make it clear to the public that government agency's approval and registration of herbal medicines does not necessarily indicate ascertaining their effectiveness.

Safety of the use of AT in this study were examined mainly in the light of place of purchase and indication for use. A good number of the respondents purchased their medicines from places that may be considered unsafe (Table 4). Efforts of NAFDAC in safeguarding the health of the nation have been observed to be inadequate with respect to the conventional herbs still being sold in soft drink/beer bottles or wrapped in torn old newspaper being hawked around and advertised in vehicles<sup>12,22-26</sup> with megaphones which are places where respondents in this study purchased their medicines making it unsafe. This may explain why most of the conditions for which the respondents took the medicines were those already outlawed by NAFDAC<sup>27</sup>. The non-effective, NAFDAC-approved medicines, though may not be harmful for consumers, may give a false confidence to the users of AT that they were receiving a therapy for an ailment when in fact they were not.

## CONCLUSION

Herbal medicines were taken for promotive, preventive and curative purposes. The study showed a high utilization of indigenous and foreign AT as well as conventional and modernized ones as in most other countries<sup>7,13,20</sup>. The pattern

described proved that a blend of modernized and conventional form is preferred to the either alone. There is also a significant number of new acceptors of AT perceived to be influenced by advertisement strategies and modernized packaging. There is high prevalence of indigenous and foreign AT use in Ilorin but in an unsafe manner. False perceived safety of AT's naturalness, modernization and NAFDAC registration contributed to the increase use.

Gender, marital status and educational status were significantly associated with safe use of AT.

## RECOMMENDATION

The regulation of advertisement and sales of harmful herbal medicines should be intensified by NAFDAC and other related agencies. Further research into the safe and effective integration of AT into modern healthcare practice in Nigeria is also recommended.

## REFERENCES

1. WHO. Traditional Medicine. Fact Sheet 2003; No 134
2. Malik IA, Kahn NA, Kahn W. Use of unconventional methods of therapy by cancer patients in Pakistan. *Eur J Epidemiol* 2000; 16: 155-160
3. Adisa R, Fakeye T. Assessment of the knowledge of community pharmacists regarding common phytopharmaceuticals sold in southwestern Nigeria. *Tropical Journal of Pharmaceutical Research* 2006; 5(2): 619-625
4. Rômulo RNA, Ierecê MLR. Biodiversity, traditional medicine and public health: where do they meet? *Journal of Ethnobiology and Ethnomedicine* 2007, 3:14
5. WHO. WHO guidelines on safety monitoring of herbal medicines in pharmacovigilance systems. WHO Geneva 2004.
6. Carmen-Kasperek M. The state of herbal medicine in Canada. *Drug information Journal* 1993; 27: 155-157
7. Moshi MJ. Current and future prospects of integrating traditional and alternative medicine in the management of diseases in Tanzania. *Tanzania Health Research Bulletin* 2005; 7(3): 159-167.
8. Moulds RFW, McNeil JJ. Herbal preparations to regulate or not to regulate? *Med J Aust* 1988; 149: 572-574.
9. Oshikoya KA, Senbanjo IO, Njokanma OF, Soipe A. Use of complementary and alternative medicines for children with chronic health conditions in Lagos. *BMC Complementary and Alternative Medicine* 2008; 8:66.
10. Health Reform Foundation of Nigeria. Material Resources for Primary Health Care Infrastructure, Drugs, Equipment and Supplies. 'In' Primary Health Care in Nigeria: 30 Years after Alma Ata. *Nigeria Health Review* 2007. HERFON 2008; 92 - 102
11. Ezeoma ER, Anarado AN, Use of complementary and alternative medicine by cancer patients at the University of Nigeria Teaching Hospital, Enugu, Nigeria. *BMC Complementary and Alternative Medicine* 2007; 7:28.
12. Obi E, Agbasi PU, Ezjiofor NA, Maduagwuna C, Orisakwe OE. Safety warnings and first aid instructions on Nigerian Traditional Herbal Remedies. Are they adequate? *World Journal of Medical Sciences* 2006; 1(2): 108-111.
13. Chang ZG, Kennedy DT, Holdford DA, Small RE. Pharmacists' knowledge and attitude towards herbal

- medicines. *The Annals of Pharmacotherapy* 2000; 34(6): 710-715.
14. NAFDAC. The role of NAFDAC in regulation and control of herbal medicines in Nigeria available on <http://www.paxherbalmagazine.com> accessed on 15th June, 2009.
  15. Huxtable RJ. The myth of beneficial nature: the risk of herbal preparation. *Ann Intern Med* 1992; 117: 165-167.
  16. Barnes J. Complementary Medicines and Pharmacists. *The Pharmaceutical Journal* 1999; 263(7067): 644-646.
  17. Olateju MA. The structure of Yoruba local drug advertisement. *International Journal of African and Africa-American studies* 2005; 1(8): 78-90.
  18. McCaffrey AM, Pugh GF, O'Connor BB. Understanding patients' preference for integrative medical care: results from patients focus groups. *J Gen Intern Med* 2007; 22(11): 1500-1505.
  19. Okogun GRA, Amadi AN. Epidemiology, therapeutic agents and cost of management of paediatric malaria in Nigeria tertiary hospital. *J Vect Borne Dis* 2005; 42: 87-94.
  20. Amira OC, Okubadejo NU. Frequency of complementary and alternative medicine utilization in hypertensive patients attending an urban tertiary care centre in Nigeria. *BMC Complementary and Alternative Medicine* 2007; 7(30).
  21. Akogun OB, John KK. Illness-related practices for the management of childhood malaria among the Bwatiye people of north-eastern Nigeria. *Malaria Journal* 2001; 4:13
  22. Abodunrin OL. Knowledge and perception of adult residents in Ilorin metropolis, Nigeria about NAFDAC-registered products and the implication. *Nigeria Hospital Practice* 2009; 4(1-2): 18-22
  23. Adeyemi A. A rhetorical analysis of the discourse of advertising herbal medicine in south-western Nigeria. *Linguistik online* 33. 2008
  24. Oshikoya KA, Senbanjo IO, Njokanma OF. Self-medication for infants with colic in Lagos, Nigeria. *BMC Pediatric* 2009; 9:9.
  25. Benjamin SCU, Obinna EO. Socio-economic differences and health seeking behaviour for the diagnosis and treatment of malaria: a case study of four local government areas operating the Bamako initiative programme in south-east Nigeria. *Int J Equity Health*. 2004; 3: 6
  26. Babalola S, Fatusi A. Determinants of use of maternal **health services in Nigeria - looking beyond individual and household factors**. *BMC Pregnancy Childbirth*. 2009; 9: 43.