

Complementary and Alternative Medicine Usage Among Patients Attending a Tertiary Hospital in Nigeria

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Abstract: The survey was to determine the frequency of usage of complementary and alternative medicine (CAM) and the factors associated with it among patients attending the general outpatient department of a tertiary care centre in Nigeria. It was carried out also in the Department of Family Medicine, Federal Teaching Hospital, Ido-Ekiti, Nigeria. It was a cross-sectional survey in which one hundred and twenty eight (128) patients were enrolled. Pre-tested questionnaire was used to collect data on demographics and other questions on knowledge and usage of CAM; satisfaction with previous usage and willingness to discuss it with their doctors. One hundred and eight (84.4%) of 128 reported that they were currently using or had used some form of CAM. Mean age of the patients was 46.8 ± 17.3 years. Fever and pains are the commonest conditions or illnesses for which CAM was used. Sixty eight (53.1%) of the patients said they were seeking treatment for the same conditions and illnesses for which they had used CAM and 46 (40%) reported that they felt CAM has helped their conditions and illnesses. CAM usage is very common among patients attending the hospital. Although only few patients learn about CAM from their doctors, majority of them think that it is important for doctors to be educated about the therapies. Doctors and other healthcare professionals need more education about CAM so that they can handle its use by their patients more effectively.

Keywords: Complementary and Alternative Medicine, Usage, Tertiary Hospital, Nigeria

1. Introduction

Complementary and alternative medicine (CAM) is a comprehensive term used to refer both to traditional medical systems such as traditional African and Chinese medicine, Indian ayurveda and Arabic unani medicine, and to a various forms of indigenous medicine [1]. The National Centre for Complimentary and Alternative Medicine (NCCAM) at the National Institute of Health (NIH) defines CAM as a group of diverse medical and health care systems, practices and products that are not presently considered to be part of the conventional medicine [2]. The NIH classifies CAM into five major categories: alternative medical systems (e.g. traditional

oriental medicine, acupuncture, ayurveda, naturopathy, homeopathy, Native American healing, Tibetan medicine); mind-body interventions (meditation, hypnosis, dance, art and music therapy, spiritual healing and prayer); biologic-based therapies (herbal medicine, dietary supplements, social diets and orthomolecular medicine); manipulative and body-based methods (chiropractic, massage, the Feldenkrais method, and aspects of osteopathic medicine such as craniosacral work); and energy therapies (reiki, therapeutic touch and other methods of affecting the bioelectricity of the body) [3, 4]. It is estimated that about 72 million used some

form of CAM in the US in 2002 and current researches show no evidence that its usage is declining [5, 6]. In other parts of the world including Africa, the usage of CAM is increasing with frequency as high as 84.7% [4, 7-9]. The nature of CAM used also varies from country to country. In Africa and Nigeria in particular, the most common CAM include herbs, spiritual healing and prayer, and dietary supplements [4, 10, 11]. Herbs have a long history in African traditional medicine. Traditional herbal medicine has continued to be a main source of health care in the rural communities and there is heavy reliance on it by the majority of the sub-Saharan African populations [4, 10-12]. There is rapidly growing literature about the use of CAM in a variety of medical conditions including malaria and typhoid fever, diabetes mellitus, hypertension, chronic pain, cancer survivors, bronchial asthma, HIV/AIDS, functional bowel disorders, stroke and depression [13-18]. Most of the patients who use CAM do not inform their doctors and some of them use these therapies concurrently with the conventional treatments. This may be dangerous because some alternative therapies, especially herbal preparations, can cause toxicity and drug interactions that may adversely affect the outcome of conventional treatments [19, 20].

In Nigeria, there were few studies on the usage of CAM and most of them were done in urban facilities and on cancer patients [4, 10, 11, 21]. The objective was to determine the frequency of usage of CAM and the factors associated with it among patients attending the GOPD of a tertiary care centre in Nigeria. We also evaluated the desire to discuss CAM with their doctors as well as willingness to use it for their presenting complaints.

2. Methods

2.1. Setting

The survey was conducted in the GOPD of the Federal Teaching Hospital (FETH), Ido-Ekiti, Nigeria. The FETH is a tertiary care referral facility located in a semi-urban setting and served Ekiti State and other neighbouring states of Osun, Ondo, Kogi and Kwara, all in Southwest Nigeria. Annually, about 25,000 patients visited the GOPD for care and treatment.

2.2. Study Design

This was a cross-sectional survey.

2.3. Patient Sampling and Ethical Issues

Consecutive patients who attended the GOPD during the period of the survey were recruited by convenience sampling. One hundred and twenty eight patients were enrolled after explanation of the nature of the survey both in verbal and written format, followed by verbal consent. The survey was granted approval by the Ethics and Research Committee of the FETH, Ido-Ekiti. Inclusion criterion was visit to the GOPD for care and treatment while exclusion criteria were age < 18 years and lack of informed consent.

2.4. Data Collection and Analysis

Data were collected using a modified version of a previously published questionnaire and administered by one of the authors. The questionnaire which was pre-tested contained both closed and open-ended response options. Questionnaire items included demographic data such as age, sex, marital status, level of formal education and monthly income. Other items were questions about knowledge and usage of CAM; if used in the past, who had recommended it; satisfaction with previous usage and willingness to discuss it with the doctors for their present illness; if they were not currently using CAM for their present illness, they were asked if they would be willing to incorporate it into its treatment. Frequencies and descriptive statistics were calculated. Chi-square and t-test were used for tests of significance as appropriate. P value < 0.05 was considered significant. All analyses were performed by SPSS version 18.

2.5. Definitions

For the purpose of the survey, CAM was defined as any treatment modality, option or service not often prescribed by orthodox medical doctor or taught in conventional medical schools in Nigeria, and included options such as native herbs, garlic and medicinal teas; nutritional supplements such as *GNLD* and *Tianchi* products; acupuncture; massage; meditation/yoga; spiritual therapy such as prayer and spiritual healing; body scarification and traditional surgery such as traditional bone setting and local cutting of uvula.

Monthly income level was categorized into low income (< NGN 18,000 i.e. < USD 120 at NGN 150 = 1USD), medium income (NGN 18,000- 150,000 i.e. USD 120-1000), and high income (> NGN 150,000 i.e. > USD 1000).

3. Results

The socio-demographic characteristics of the patients evaluated are displayed in Table 1. One hundred and eight (84.4%) out of 128 reported that they were currently using or had used some form of CAM. The mean age of the patients surveyed was 46.8 years, with a range from 19 to 80 years. The most frequently used CAM modalities were herbs (56.7%) and spiritual therapy (22.5%) (Table 2). Fever and pains are the commonest conditions or illnesses for which CAM was used (Table 3). Sixty eight (53.1%) of the patients said they were seeking treatment for the same conditions and illnesses for which they had used CAM and 46 (40%) reported that they felt CAM has helped their conditions and illnesses. Question on source of knowledge of CAM revealed that majority of the patients (64.5%) learned it from their family and friends (Table 4). Eighty (62.5%) stated that they would discuss their usage of CAM with their doctors and 88 (68.8%) thought that it was important for doctors to be educated about CAM practices. However, only 48 (37.5%) reported that they would be willing to incorporate CAM into the treatment of their presenting conditions and illnesses.

Table 1. Socio-demographics characteristics.

Characteristics	Total (%)	CAM users (%)	Non-CAM users (%)	P value
Mean age	46.8 ± 17.3	48.3 ± 17.9	39.8 ± 12.1	
Sex				
Male	61 (47.7)	50 (47.2)	11 (50.0)	0.02
Female	67 (52.3)	56 (52.8)	11 (50.0)	1.08
Religion				
Christianity	102 (79.7)	82 (77.4)	20 (90.9)	0.04
Islam	19 (14.8)	17 (16.0)	2 (9.1)	0.01
Traditional	7 (5.5)	7 (6.6)	-	-
Others	-	-	-	-
Marital status				
Single	25 (19.5)	22 (20.9)	3 (13.6)	0.74
Married	89 (69.5)	72 (67.9)	17 (77.3)	0.80
Divorced/Separated	6 (4.7)	6 (5.6)	-	-
Widowed	8 (6.3)	6 (5.6)	2 (9.1)	1.02
Education				
Nil	24 (18.7)	21 (19.8)	3 (13.1)	0.90
Primary	22 (17.2)	20 (18.9)	2 (9.1)	0.40
Secondary	22 (17.2)	19 (17.9)	3 (13.6)	1.00
Post-secondary	60 (46.9)	46 (43.4)	14 (63.7)	0.01
Income level				
Low income	77 (60.2)	71 (67.0)	6 (27.3)	0.001
Middle income	50 (39.1)	35 (33.0)	15 (68.2)	0.01
High income	1(0.7)	-	1 (4.5)	-

Table 2. Type of CAM used by the patients.

CAM	Frequency (%)
Herbs*	106 (56.7)
Nutritional supplements**	18 (9.7)
Spiritual therapy	42 (22.5)
Traditional surgery	4 (2.1)
Body scarifications	12 (6.4)
Massage	4 (2.1)
Acupuncture	-
Meditation	1 (0.5)

*Herbs include: Native herbs (89, 47.6%), Garlic (10, 5.3%), Medicinal tea 7, 3.7%). **Nutritional supplements include: *GnLD* products (10, 5.3%), *Tianchi* (6, 3.2%), Others (2, 1.1%). Traditional surgery include: traditional bone setting and local cutting of uvula.

Table 3. Conditions and illnesses for which CAM was used.

Conditions/Illnesses	Frequency (%)
Fever	60 (38.5)
Diabetes	12 (7.7)
Hypertension	18 (11.5)
Pains	34 (21.8)
Cough	10 (6.4)
Eye illnesses	4 (2.6)
Sexually transmitted infections	2 (1.3)
Wellness	6 (3.8)
Others	10 (6.4)

Table 4. Sources of knowledge of CAM.

Sources	Frequency (%)
Family/friends	98 (64.5)
Television/Radio	16 (10.3)
Internet	2 (1.3)
Books/brochure	4 (2.6)
Medical doctors	4 (2.6)
Church	18 (11.5)
Others	10 (6.4)

4. Discussion

Globally the prevalence of CAM usage is increasing and varies widely among settings [4, 9-11]. We found a high prevalence of 84.4%. Although similar to a finding of 84.7% reported by Onyapat *et al* [11], the prevalence is one of the highest in the literature and in contrast to some reported rates [4, 7]. The difference may be due to one of or a combination of several factors. The study population consisted patients attending the GOPD. In this setting, patients attending GOPD often have common illnesses such as malaria fever, pains and cough for which CAM is readily available for usage [12]. Herbal medicines are perhaps the most readily available form of treatment for malaria fever in poor rural Africa [12, 13, 22]. The high prevalence could also be partly due to the definition and scope of CAM used for the study. Culture and religion are critical issues in the Nigerian society and they strongly influence the people's belief system on the origin of disease and the approach to treatment and control. The cost of conventional treatment is also a factor that can't be overlooked in this setting. Nigeria is a resource-poor country, largely agrarian and traditional, with more than 60% of the population living in rural areas and about three quarters of the citizens barely surviving on less than two US dollars per day [10, 23]. Nigerians struggles with obsolete and dilapidated health services infrastructure together with chronic underfunding of the health sector and resultant poor but costly conventional treatment services.

In this study, patients who used CAM were more likely to be older than those who did not. Also those with post-secondary education were more likely not to use CAM than

those with lower and no formal education. These findings differ from the report of the study conducted by Amira *et al* [4] in Lagos, Nigeria, where CAM was independent of socio-demographic factors. However, it is consistent with the study by Onyapat *et al* [11] which found that participants with no formal education were more likely to have used CAM than those who had higher education. This variation may be due in part to the difference in the study population. While our study was conducted among GOPD patients, the Lagos' was in hypertensive patients in the hypertension clinic. Many studies from the US and Australia found several associations between demographic factors and CAM usage. In these studies, higher education and wealth are predictors of CAM usage [3, 7]. In the African settings, culture, traditions and religion are major issues that affect the way people live. Superstitious beliefs are very common and also promote tendency to believe in unconventional means to achieve their health needs [12]. This may be responsible for why older and less educated people are more likely to use CAM than younger generations with better exposure to Western education.

Our study revealed that less than 3% of the patients learned about CAM from their doctors and about 62.5% stated that they would like to discuss CAM with their doctors. This finding is similar to the one reported by Waterbrook *et al* [5]. CAM is prevalent in every society and culture that regardless of personal opinions, conventional health professionals need more education about it. This is important as we need to know all therapeutic modalities our patients are using so that we can give appropriate counseling and instructions to promote their health and wellbeing. In our conventional practice, issues about CAM are common occurrences and we need to face this reality. Although much of the existing literature on CAM is anecdotal, some of these therapies such as acupuncture existed before evidence-based medicine [5]. Furthermore, many of the conventional treatments originated from natural sources, for example: digoxin from foxgloves [5, 24], opiates from poppies [5, 25, 26] and taxol from the bark of Pacific Yew [5, 27-29].

In this study CAM was reportedly used for a variety of conditions and diseases, from fever and pains to chronic non-communicable diseases such as hypertension and diabetes mellitus. Studies on CAM conducted specifically among hypertensive cohorts showed a high prevalence of usage ranging from 39.1% by Amira *et al* [4] in Nigeria and 63.9% by Shafiq *et al* [30] in India, to 80% by Eddouks *et al* [31] in Morocco. Also, in this study 40% of patients who used CAM reported that they felt CAM had helped their conditions and illnesses. This finding is similar to the report by Waterbrook *et al* [5] which reported 45% and in contrast with the finding of 25% reported by Ezeome *et al* [10]. The difference may be due in part to the fact that our study was done among GOPD patients while the latter study was conducted specifically among cancer patients. As it was discussed above, although much of the existing literature on CAM is anecdotal or descriptive [5], there is no doubt that some of these therapies

have benefits and useful purpose [25-29].

5. Conclusion

The use of CAM is very common among patients attending GOPD of our hospital. While herbs are the most common type of CAM used; fever, pains and hypertension are common conditions for which it is used. Although only few patients learn about CAM from their doctors, majority of them think that it is important for doctors to be educated about the therapies. Doctors and, by extension, other healthcare professionals need more education about CAM so that they can be in a position to manage their patients more effectively.

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