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A Survey on the Use of Complementary and Alternative Medicine Among Ethiopian Immigrants in the USA

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Abstract

A survey on complementary and alternative medicine (CAM) use among 358 Ethiopian immigrants in the USA revealed that 206 respondents (57.5%) [95% CI, 52.5% to 62.8%] had used herbs and supplements in the preceding five years, with garlic, ginger and flaxseed being the most commonly cited. A majority, 107 (52%) of the respondents, used supplements and herbs for respiratory illnesses. 77.7% (160) denied ever experiencing untoward effects from taking these products. Other traditional modalities employed include acupuncture, chiropractice, holy water, incense burning, prayer and traditional manipulation (*wegesha*). Prayer was the most frequent non-herbal modality, and was practiced by 144 (70%) of survey participants. 47% of the respondents who used alternative medicine were in the 31 to 50 year-age range, and 71.8% used herbs and supplements at least once a month. No significant gender difference in scope of CAM utilization was recorded in the survey. Among users of CAM, 177 (85.9%) had health insurance coverage, suggesting that use was not predicated by lack of access to conventional medicine. CAM is an important component of self-health care among Ethiopian immigrant communities in the USA.

Keywords: Complementary medicine; Alternative modalities; Ethiopian immigrants; On-line survey

Introduction

The prevalence and pattern of CAM utilization in the United States were reported by Eisenberg et al in two papers published in 1993 and 1998 [1,2]. A total of 1539 and 2055 adults participated in the 1991 and 1997 surveys, respectively. It was reported that the use of alternative therapies increased from 33.8% in 1990 to 42.1% in 1997. The modality that showed the highest increase during this time period was herbal medicine. According to a more recent estimate, about 62% of Americans use CAM which included prayer specifically done for health reasons [3].

The pattern of alternative medicine use among various immigrant communities in the USA has been reported, including for Chinese, Hispanic, Latino and other communities. A survey of 198 Chinese immigrants at two clinic sites in San Francisco indicated almost all (98%) of the respondents used CAM. Of these, 93% used herbal medicine the previous year [4]. In a review of 42 studies among Hispanics, it was shown the rate of CAM use was 50-90% in most of the reports [5]. A 2003-2004 survey of 620 Hispanic patients at five urban health centers in Indianapolis, Indiana revealed 80.3% used herbs, with 59.6% of the patients having taken 6-15 different herbs during their lifetime [6]. It has been reported that 18% of Mexican immigrants use CAM. In a larger study that surveyed 3,258 Chinese and Vietnamese immigrants with limited English proficiency, 60% of the respondents reported the use of CAM [7]. Similarly, an interview with 96 Latino immigrants of Mexican, El Salvadoran and Guatemalan origin in Los Angeles revealed many of them use home remedies and herbals [8].

A 2009 study reported the use of about 105 natural remedies (89 of plant origin and the rest from mineral and animal sources) among the 1,00,000 Ethiopian immigrants in Israel. This finding was based on a survey of Ethiopian markets and stores throughout Israel. As many as 20 prominent Ethiopian traditional healers and about 30-50 healers who specialize in various treatment approaches practice folk medicine to treat members

of the Ethiopian community in Israel [9]. As cited by Kassay et al. [10], herbs, traditional medical devices and traditional medicine practitioners are available to Ethiopian immigrants in the United Kingdom. These cenario in North Americacontrasts with that of Israel in that there are no practicing Ethiopian traditional healers, and the population is younger and less cohesive [11]. It has been speculated that Ethiopians use traditional remedies in the USA, and yet do not disclose such use to their health care providers [12].

According to a 2014 Migration Policy Institute census, an estimated 2,51,000 Ethiopian immigrants live in the United States, accounting for the second largest Diaspora population from Africa after Nigeria. California, Virginia, Maryland, Minnesota, Texas and Washington, D.C. metro area are home to most of these immigrants. About 64% (1,60,800) of the population (first- and second-generation combined) are in the 18 to 64 years-old age bracket [13]. Cultural influences and spiritual beliefs have been implicated in inducing immigrants in the U.S. to turn to alternative medicine [14]. The Ethiopian immigrant population contributes to the ethnic and cultural diversity of the USA. They bring with them various cultural practices, such as food, arts, music and other traditional experiences. Traditional medicine is widely used in Ethiopia, and most of the first generation immigrants had some level of exposure to this experience before they settled in the United States. To the best knowledge of these investigators, no study has been published on the use of CAM by Ethiopian immigrants in the USA. The objective of this survey was to determine the extent and pattern CAM use among Ethiopian immigrants in the USA.

Methods

This study was approved by the Institutional Review Board (IRB) of Howard University. Prior to launching the study, a pre-survey questionnaire was administered to a group of 28 randomly selected Ethiopian immigrants. The respondents were requested to fill out the questionnaire on-line and provide feedback. Important suggestions were incorporated into the final survey questionnaire comprising of 19 questions used in this study (Appendix 1). Prior to and during the launch of the survey, flyers explaining the purpose of the study and encouraging eligible Ethiopian immigrants to participate, were distributed at churches and other places where Ethiopians congregate in the DC metro area. They were also posted on People to People Inc. website and other ethiocentric on-line groups. Invitation to participate was sent to a total of 695 eligible participants obtained from P2P's database via MailChimp®. The survey was conducted between 13 April 2016 and 31 August 2016. Data were collected and analyzed by using primarily a SurveyMonkey® tool. Additional data were collected from the hand-filled questionnaire forms.

Results

Table 1: Demographic & Social Characteristics of Respondents Using CAM.

Characteristics	No. of Users	% of Users	(95% CI for %)
Gender			
Male	111	53.9	(46.6%-60.2%)
Female	92	44.7	(38.3%-51.9%)
Not stated	3	1.5	(0.5%-3.4%)
Total	206	100	
Age (in years)			
18-30	35	17	(12.1%-22.3%)
31-40	47	22.8	(18.5%-28.6%)
41-50	48	23.3	(18%-28.6%)
51-60	43	20.9	(15.5%-26.7%)
Greater than 60	30	14.6	(9.7%-19.4%)
Not stated	3	1.5	(0.0%-3.4%)
Total	206	100	
Education			
<12th Grade	9	4.4	(0.0%-3.4%)
High school diploma/GED	11	5.3	(2.9%-8.7%)
Some college	34	16.5	(11.2%-21.4%)

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Associate degree/diploma	19	9.2	(5.3%-13.6%)
BA/BSc degree	54	26.2	(20.9%-32.5%)
MSc or higher degree	76	36.9	(30.6%-43.7%)
Not stated	3	1.5	(0.0%-3.4%)
Total	206	100	
Yearly family income			
$0 to 50,000	88	42.7	(35.9%-49.0%)
50,001 to 100,000	63	30.6	(23.9%-33.3%)
100,001 to 150,000	23	11.2	(7.3%-15.5%)
Greater than 150,000	29	14	(9.7%-18.9%)
Not stated	3	1.5	(0.0%-3.4%)
Total	206	100	
Years in the United States			
Less than a year	18	8.7	(5.3%-13.1%)
1-5 years	14	6.8	(3.9%-10.2%)
6-10 years	30	14.6	(10.2%-19.4%)
11-15 years	32	15.5	(10.7%-20.4%)
More than 15 years	109	52.9	(46.1%-59.7%)
Not stated	3	1.5	(0.0%-3.4%)
Total	206	100	

Out of a total of 695 eligible people were invited to participate in the survey, 358 completed the questionnaire, resulting in a 51.5% response rate. The pattern of response among CAM users was: males 111, females 92; 35, in the age range, 18-30; 47 (31-40); 48 (41-50); 43 (51-60) and 30 (over 60-year age range). In the survey, 206 (57.5%) [95% CI, 52.5% to 62.8%] of the respondents used herbs and supplements in the past five years. Respondents who most often use alternative medicine (88; 42.7%) had a range of annual family income (USD $0-50,000), while the lowest number of respondents (23; 11.2%) had an annual family income in the range $1,00,001-1,50,000. Of a total of 206 respondents who use herbal/supplements, 76 (36.9%) had education at the MSc degree, or higher level, while 54 (26.2%) had a BA/BSc degree (Table 1). The most common herb used was garlic (163, 79.1%), followed by ginger (170, 82.5%), with a combined 139 (67.2%) respondents using both herbs. Friends and families (75.2%) and the Internet (35.4%) were the most common sources of information about herbals and supplements (Table 2). With respect to other CAM modalities, 144 (69.9%) used prayers, while 123 (59.7%) used holy water (Table 3). The most common ailments treated with complementary medicine were those related to respiratory (107; 51.9%) and gastro-intestinal (88; 42.7%) problems (Table 4). About 91% (187) of those who used herbals and supplements also use other forms of alternative medicine (Table 3). A total of 183 (88.8%) respondents who took herbs and supplements had medical insurance (Table 5). Of the 125 respondents who answered the specific question, 69 (55.2%) did not tell their primary care physician their use of herbals and supplements. Respondents who had education at the BA/BSc or MSc levels (130, 63.1%) were the most frequent users of alternative medicine.

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Table 2: Use Pattern of Herbals and Supplements.

Pattern of Use	n	% of respondents
Herbs/supplements		
Garlic	163	79.1
Ginger	170	82.5
Flaxseed	124	60.2
Honey	100	48.5
Lemon	87	42.2
Vitamins	75	36.4
Eucalyptus (bahr zaf)	70	34
Boswelia(itan) *Commiphora (*kerbe)	36	17.5
Damakese (*Ocimum sp.*)	35	17
Moringa	33	16
Duba fre (*Cucurbitapepo*)	30	14.6
Dingetegna (*Taverneriaabyssinica*)	15	7.3
Tej sar (Cymbogon sp)	8	3.9
Where herbs/supplements were bought*		
Brought from Ethiopia	93	45.1
Herbal stores	75	36.4
Ethiopian stores	73	35.4
CVS/other stores	16	7.8
Frequency of use		
Daily	31	15
Weekly	70	34
Monthly	47	22.8
Yearly	31	15
Rarely	14	6.8
Once in the last five years	10	4.9
Side effects experienced		
Never	158	76.7
Rarely	39	18.9
On several occasions	5	2.4
Missing	4	1.9
Sources of Information*		
Friends and Families	155	75.2
Internet	73	35.4
Books and magazine	50	24.3
Television ads	6	2.9
Others	21	10.2

*% ages do not add up to 100%, because some respondents gave multiple answers.

Table 3: Non-Herbal Alternative Therapies Used*.

Type of Alternative Therapy	Respondents (n)	Percentage (%)
Prayers	144	70
Holy water	123	59.7
Acupuncture	52	25.2
Massage	52	25.2
Incense burning	43	20.9
Traditional manipulation	28	13.6
(wegesha)		
Chiropractice	22	10.7
Biofeedback	16	7.8

*Total number of respondents = 180; most respondents reported use of more than one type therapy at the same time.

Table 4: Reported Indications and Frequency of CAM Use.

Indications	Respondents (n)	Percentage (%)*
Brain (e.g. headache, poor memory)	27	13.1
Diabetes	12	5.8
Gastrointestinal (e.g. dyspepsia, gastritis)	88	42.7
Heart problems	42	20.4
Pain/arthritis	36	17.4
Psychiatry (e.g. depression, insomnia)	13	6.3
Respiratory (e.g. cough, cold, sore throat)	107	51.9
Skin/Wound	27	13.1

*Calculated based on 206 CAM users; most respondents reported more than one use.

Table 5: Insurance Status of Respondents Who Use CAM.

Health Insurance	n	%
Insured	183	88.8
Uninsured	21	10.2
Not stated	2	1
Total	206	100

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Discussion

Ethiopian immigrants in the USA have strong attachment to traditional and alternative medicine which is deeply rooted in their culture and belief system.Heavy utilization of CAM probably stems from their country of origin, where an estimated 80% of the population still uses non-conventional modalities. In Ethiopia itself, the frequency of use can be much lower in urban areas. For example, a survey in Addis Ababa, Ethiopia showed that 26% of the population use traditional medicine [15]. Compared to the frequency reported for Addis Ababa, our survey showed a significantly higher rate at 57.5%. In addition to herbals and supplements, 180 respondents (87.4%) also used other alternative modalities (Table 3).

Although our survey showed more men than women used CAM (53.9% vs 44.7%), the difference is not significant (p=0.076). Respondents in the age groups 31-40 and 41-50 are more frequent users of CAM. Overall, age did not correlate with CAM use (r2=0.0584, p=0.696, calculated for age mid-points). Respondents (42.7%) with lower income bracket ($0 to $50,000) and those with a Master's degree or higher educational levels (36.9%) are the most frequent users of CAM (Table 1). It appears there is no linear relationship between income and education level among Ethiopian immigrants, as many may not be able to pursue their professional career after resettling in the USA. About 89% of respondents who used CAM in our survey had health insurance (Table 2), which is on a par with figures reported for African Americans (81.5%), Asian Americans (87.3%) and non-white Latinos (87.2%) [16]. It is also interesting to note in one survey 55.2% did not report their use of alternative modalities to their healthcare providers [17]. In a large survey of about 1,000 people aged 50 years and older, it was found 67% did not discuss their CAM use with their health care provider [18]. In our survey, we found a much lower number (55.2%) did not divulge this information to their primary care providers. The majority of the survey respondents (75.2%) learned about herbals and supplements from friends and families, which perhaps emanated from the family tradition and close intra-community ties and interactions. Similar trends were obtained from a Lebanese national CAM survey [19]. In another study, family and friends figured prominently as sources of information [20]. In our study, television advertisement (6; 2.9%) is the least frequently used source of information about CAM. This is consistent with a similar trend seen in another study [18].

When all respondents (n=358) were asked an open-ended question to comment in support or against use of CAM, 54.5% had a favorable response. Answers ranged from a simple "I support it" to more detailed explanations such as: "it is natural; it has less side-effects, for limited problems; if FDA-regulated; if properly standardized; as an addition to modern medicine; if supported by evidence". Out of the 206 who use CAM, 69.4 % reported that they are in favor of it. Fifty-six of CAM users did not answer the question. About 95% of those who answered reported that they favor CAM. Those respondents who disfavor use of CAM cited as reasons: as simple as "I don't trust; lack of effectiveness; lack of safety data; interaction with prescription drugs." A few respondents claimed they do not have enough information to be swayed in either direction.

Conclusion

A survey of CAM use among Ethiopian immigrants in the USA revealed about 57.5% utilization of this alternative modality. This figure is consistent with other similar studies conducted in different immigrant populations in the United States. They use CAM for minor and uncomplicated ailments. Families and friends were cited as the most common sources of informationon herbs, supplements and other alternative therapies. About 55% of CAM users did not share the information with their health care providers. It is increasingly important for clinicians catering to the immigrant population to extract this information from their patients as they have a significant potential to alter the pharmacodynamiscs and pharmacokinetics of concomitantly utilized conventional drugs. Almost all users of CAM support the use of alternative therapies with a majority suggesting the need for more research in determining dosage, safety and other aspects of CAM.

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Appendix 1

Survey questionnaire

1.Contact information

2.What is your age range?

[a] 18-30 [b] 31-40 [c] 41-50[d] 51-60 [e] Above 60

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3.What is your gender?

4.How long have you lived in the USA?

[a] Less than 1 year [b] 1-5 years [c] 6-10 years

[d] 11-15 years [e] More than 15 years

5.Level of education

[a] < 12th grade [b] High school diploma/GED [c] Some college

[d] BA/BSc [e] MSc or higher

6.What is your approximate average household income?

[a] $0-$50,000 [b] $51,001-$100,000 [c] $101,001-$150,000

[d] Above $150,000

7.Have you taken any supplements/herbals in the past 5 years?

[a] Yes [b] No

8.Have you made your primary care provider aware of your usage of supplement/herbs?

[a] Yes [b] No

9.Do you have medical insurance?

[a] Yes [b] No

10.What other complementary medicine modalities have you used besides supplement/herbals (select that apply)?

[a] Holy water [b] Prayer [c] Incense (itan)

[d] Traditional manipulation (wegesha) [d] Chiropractor

[e] Acupuncture/massage/acupuncture [e] Others (please specify)

11.What are the names of the supplements/herbs used?

[a] Ginger [b] Garlic [c] Flaxseed [d] Dingetegna

[e] Moringa [f] Bahrzaf [g] Itan/Kerbe [h]Duba fre [i] Kosso/Metere

[j] Damakese [k] Tej sar [l] Lemon [m] Honey [n] Spirits [o] Vitamins

[p] Others (please specify)

12.How often do you use supplements or complementary modalities?

[a] Daily [b] At least once a week [c] At least once a month [d] At least once a year [e] At least once in the past five years [f] Rarely

13.For what ailments or disease conditions did you take the supplemental/herbal product

[a] Heart (e.g. high blood pressure, high cholesterol) [b] Diabetes

[c] Skin/wound [d] Respiratory (e.g. cough, cold and sore throat)

[e] Pain/Arthritis [f] Brain (e.g. headache, poor memory)

[g] Stomach (including gastritis, dyspepsia) [h] Kidney [i] Psychiatry (e.g. depression, insomnia)
[j] Other (please, specify)

14.Do these complementary modalities help? If so, how?

15.How often have you experienced unwanted side effects from herbals and supplements?

[a] Rarely [b] On several occasions [c] Never

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16.If you experienced side effects from herbals or supplements, please describe the episode.

17.Where did you obtain or buy the supplements/herbals (please, select all that apply)?

[a] Ethiopian stores [b] Brought or sent from Ethiopia [c] Friends and family in the USA [d] Herbal stores [e] Other (please specify)

18.How did you learn about the supplements/herbs (select all that apply)?

[a] Books/Magazines [b] Friends/Family [c] Internet [d] Others (please specify)

19.What is your overall comment in support or against the use of herbals/supplements and other complementary medicine?

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