COMPLEMENTARY AND ALTERNATIVE MEDICINE USE AMONG HEALTH WORKERS IN MID-DELTA, EGYPT

*Ahmed T. ElOlemy[1], Nashwa M. Radwan[2], Walid Dawood[3], Ihab Ali[3], Latifa M. Fouda[3]

ABSTRACT

***Background**: Alternative and complementary medicine (CAM) attracted national attention from the media, governmental agencies, and the public. The Study aimed at assessing pattern of CAM use among health workers in mid-Delta, Egypt.* ***Design and Methods:** A cross-sectional descriptive survey with multi-stage random sample technique was used. A total sample size of 873 health workers (technicians, allied health personnel, pharmacists and physicians) was chosen randomly from two university hospitals and four general hospitals in mid-Delta. They fulfilled self-administered questionnaire regarding their socio-demographic data, knowledge on CAM and their sources, causes of CAM use, diseases for which CAM used and commonly used CAM practices in the area.* ***Results**: females constituted 77.32% of the sample, 47.42% aged 20 - 25 years, 54.64% have less than 5 years of work, 46.39% have bachelor's degree and 50.52% have diploma. Three fourths of health workers have knowledge about CAM, 4.12% usually use CAM and 38.14% sometimes use it. Media was the source of CAM knowledge for 54.79%, followed by relatives and friends for 31.51%. One fourth of participants talk on CAM with their patients and 28.87% advice patients to use CAM. Minimal side effects (43.29%) and religious believes (21.64%) are the main causes of using CAM. Patients use CAM for backache, joint pain, abdominal colic and flatulence (18.45%, 14.56%, and 12.62%) respectively. Prophetic medicine, Honey and bee products, herbal products, food supplements and Hijama were the commonly used CAM practices in the area (73.2%, 65.98%, 47.42%, 45.26% and 38.14% respectively).* ***Conclusion**: There is an increasing interest in CAM knowledge among health workers. Media, relatives and friends are the main sources of information. Religious practices as Prophetic medicine, honey and bee products, herbs and hijama are the most prevalent CAM practices in the area. There is reluctance in talking with their patients on CAM or referring patients to CAM practitioners.* KEY WORDS*: Alternative, Complementary, Medicine, Health workers, knowledge, causes, mid-Delta, Egypt.*

ملخص: جذب الطب البديل والتكميلي (CAM) الاهتمام الوطني به من خلال وسائل الإعلام والوكالات الحكومية والجمهور. هدفت هذه الدراسة إلى تقييم نمط استخدام الطب البديل والتكميلي بين العاملين في مجال الصحة في وسط الدلتا بمصر. **منهج البحث**: تم استخدام المسح الوصفي المقطعي , وباختيار عينة عشوائية متعددة المراحل. بلغ حجم العينة ٨٧٣ من العاملين الصحيين (فنيين وموظفي الصحة ، والصيادلة، والأطباء) تم اختيارهم بشكل عشوائي من اثنين من المستشفيات الجامعية وأربعة مستشفيات عامة في وسط الدلتا بمصر. استخدم استبيان يحوي البيانات الاجتماعية والديمغرافية، والمعرفة عن الطب البديل والتكميلي ومصادرها، أسباب استخدامه، والأمراض التي يعالجها وممارسات الطب البديل والتكميلي التي يشيع استخدامها في المنطقة. **النتائج**: شكلت الإناث (٧٧،٣٢٪) من العينة. (٤٧،٤٢٪) اعمارهم بين ٢٠-٢٥ عاما. ثلاثة أرباع العاملين في مجال الصحة لديهم معرفة حول الطب البديل والتكميلي ،(٤،١٢%) عادة ما يستخدمون الطب البديل والتكميلي و(٣٨،١٤٪) يستخدمونه في بعض الأحيان. كانت وسائل الاعلام مصدر المعرفة بالطب البديل والتكميلي ل (٥٤،٧٩٪)، تليها المعرفة بواسطة الأقارب والأصدقاء ل (٣١،٥١ ٪). ربع المشاركين بالدراسة سبق لهم ان تحدثوا مع مرضاهم عن الطب البديل والتكميلي ، (٢٨،٨٧٪) اشاروا علي مرضاهم باستخدام الطب البديل والتكميلي. اتفق (٤٣،٢٩٪) من المشاركين علي استخدام الطب البديل والتكميلي لقلة آثاره الجانبية و (٢١،٦٤٪) لمعتقدات دينية. يستخدم (١٨،٤٥٪) من المرضى الطب البديل والتكميلي لآلام الظهر، و(١٤،٥٦٪) لآلام المفاصل، و(١٢،٦٢٪) للمغص وانتفاخ البطن. كان

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**Correspondence*: a_elolemy@yahoo.com
[1]Prof. of Public Health and Community Medicine, Faculty of Medicine, Tanta University, Egypt, and Consultant in NCCAM, Saudi Arabia. [2]Prof. of Public Health and Community Medicine, Faculty of Medicine, Tanta University, Egypt.[3]Assistant. Prof. of Public Health and Community Medicine, Faculty of Medicine, Tanta University, Egypt

الطب النبوي والعسل ومنتجات النحل، ومنتجات الأعشاب والمكملات الغذائية والحجامة من ممارسات الطب البديل والتكميلي التي تستخدم عادة في المنطقة بالنسب التالية (٧٣,٢٪، ٦٥,٩٨٪، ٤٧,٤٢٪، ٤٥,٢٦٪ و ٣٨,١٤٪ على التوالي). **الخلاصة**: هناك اهتمام متزايد في المعرفة بخصوص الطب البديل والتكميلي بين العاملين في مجال الصحة. وسائل الإعلام والأقارب والأصدقاء هي المصادر الرئيسية للمعلومات. الممارسات الدينية والطب النبوي، والعسل ومنتجات النحل والأعشاب والحجامة هي الممارسات الأكثر انتشارا في المنطقة. هناك تردد في الحديث مع المرضي عن الطب البديل والتكميلي أو إحالة المرضى إلى ممارسين الطب البديل والتكميلي .

INTRODUCTION

Complementary and Alternative Medicine (CAM) is defined as a group of diverse medical and health care systems, practices, and products that are not generally considered to be part of conventional medicine.[1] National surveys performed worldwide suggest that CAM is popular throughout the industrialized world.[2] Population who use CAM therapies during the last 12 months has been estimated to be 10% in Denmark (1987),[3] 33% in Finland (1992),[4] 49% in Australia (1993),[5] and 15% in Canada (1995).[6] A considerable use exists in many developing countries (Colombia, 40%; Chile, 71%; up to 80% in African countries).[7,8] Exact estimates of expenditure on CAM have been difficult to determine though there is little doubt that it is enormous. In 2002, it was estimated that the amount spent on CAM in the USA was US $2.7 billion, US$ 2.4 billion in Canada, and US$ 2.3 billion in the United Kingdom.[9]

CAM services are usually used alongside and in addition to conventional medicine. Thus, a vast informal and silent health care sector exists in almost all countries. No comprehensive picture of this sector exists as yet in any country.[10] Data on effectiveness of various CAM treatments being used alone and in combination are inadequate. CAM is used by the people in management of chronic conditions that are costly to society, such as chronic pain and arthritis, and more life-threatening diseases, such as heart diseases and cancer.[11]

The exact reasons for the popularity of CAM are complex; they change with time and place; they may vary from therapy to therapy. They are different from one individual to another.[12] On the contrary, many health professionals refuse to take CAM seriously as it lacks, to their opinion, the scientific evidence.[13] Lack of scientific evidence may be related to the financial, methodological and ethical obstacles in researching CAM.[13]

Health workers may be source of knowledge about CAM as they are turned to frequently by some of their patients for seeking advice. This may explain the huge variation in the prevalence rate.[14] Some studies demonstrated a wide variation in the knowledge and practice of physicians. However, there was a tendency towards increasing use and more positive attitude towards CAM. Many factors are interplaying, most importantly the type of training in medical education, as well as the community itself.[15-17] In a Canadian and United States data base search, physicians' attitude towards CAM was more negative compared to other health care professionals such as nurses, public health professionals, dietitians, social workers, medical/nursing school faculty, and pharmacists.[18]

Tibbu Nabawi or prophetic medicine is broadly accepted and practiced by most physicians and the public in Saudi Arabia and most Arab and Islamic countries. National Center for CAM in Saudi Arabia 2010,[19] Al-Faris et al.,[20] and Hassan et al.,[21]

recorded that more than 70% of the public had used practices related to prophetic medicine in their lifetime. The Study aimed at assessing pattern of CAM use among health workers in mid-Delta, Egypt.

DESIGN AND METHODS

Study design: A cross-sectional descriptive survey.

Study settings: General and university hospitals in the four governorates of Mid-Delta region (Gharbia, Kafr El-Sheikh, Dakahlia and Menofyia governorates).

Study population: Health workers (technicians, allied health personnel, pharmacists and physicians) working in mid-Delta region.

Study sample: Multistage sample technique was used. First phase one General hospital was chosen randomly from all general hospitals in each governorate, in addition to two university hospitals Chosen randomly from the three university hospitals in mid-Delta region. The second phase a stratified random sample was taken from Tanta University hospitals and Zifta general hospital in Gharbia governorate, Kafr El-Sheikh general hospital in Kafr El-Sheikh governorate, Met-Ghamr general hospital in Dakahlia governorate and Menofyia university hospitals and Berket El-Sabe general hospital in Menofyia governorate. Health workers in different hospitals were classified into different strata; technicians including nurses, allied health personnel including psychologists, dietitians, social workers and physiotherapists, pharmacists and physicians. The third phase a systematic random sample was taken from each stratum. One hundred fifty health workers were chosen from each hospital. The total sample size was 873 participants who completed the study.

Table (1): Socio-demographic characteristics of studied population

Characteristics	*Number (873)*	*Percent*
Age:		
20-	414	47.41
25-	252	28.87
30-	81	9.28
35-	63	7.22
40+	63	7.22
Sex:		
Males	198	22.68
Females	675	77.32
Years of work:		
-5	477	54.64
5-	207	23.71
10-	63	7.22
15-	72	8.24
20+	54	6.19
Education:		
Bachelor	405	46.39
Diploma	441	50.52
Master	27	3.09
Occupation:		
Physicians	54	6.19
Pharmacists	72	8.25
Allied health personnel	270	30.92
Technicians including nurses	477	54.64
Work site		
Ministry of Health	576	65.98
University	297	34.02

Methods of data collection: An international self-administered questionnaire approved by the National Center for CAM in United States was used for data collection.[11] Questionnaires were distributed and collected within 10 minutes at the same session. The questionnaire included: 1. socio-demographic data e.g. age, sex, residence, highest qualification, occupation and years of experience. 2. Knowledge about CAM and its sources. 3. Causes of using CAM. 4. Common diseases for which CAM used. 5. Commonest CAM modalities used in the area. Data were collected from July 2011 to December 2011.

Statistical analysis: Data were collected, presented in tables, and statistically analysed using SPSS statistical package version 18. Data were presented using

frequencies, percentages and 95% confidence interval. CAM practices were classified according to use into commonly used (>80%), usually used (60-80%), neutral (40-<60%), sometimes used (20-<40%) and rarely used (<20%).

Medical ethics: Approval of the study was taken from administrators of Ministry of Health (MOH) in Mid-Delta governorates (Gharbia, Menofyia, Kafr El-Sheikh and Dakahlia). Also, approval from managers of Tanta and Menofyia university hospitals was taken. A verbal approval was taken from each participant to share in the study. Confidentiality was ensured.

RESULTS

Table (1) showed socio-demographic data of study participants. Most of participants (47.42%) aged 20 to less than 25 years and 28.87% aged 25 to less than 30 years. Males represented 22.68% while females constituted 77.32%. About fifty five percent have less than 5 years of work, 23.71% have less than 10 years of work and 6.19% have 20 years or more of work. More than four hundred participants (46.39%) have bachelor degree, 50.52% have diploma and 3.09% have Master degree. Technicians including nurses constituted 54.64% and 30.93% allied health personnel. 65.98% of participants are working in hospitals related to MOH.

Health workers have knowledge about CAM represented 75.26%. Only 4.12% of participants usually use CAM and 38.14% sometimes use it. Different media was the source of CAM knowledge for 360 of knowledgeable participants (54.79%), relatives and friends were the source of knowledge for 31.51%, health educational organizations 6.85% and books, lectures, workshops and internet only 6.85%. Only 24.74% of participants talk on CAM with their patients and 28.87% advice patients to use CAM. Minimal side effects of CAM is the main cause of using it (43.29%) followed by religious beliefs (21.64%), effectiveness of CAM (17.13%), low cost (14.43%) and failure of conventional medicine (11.72%). Easy accessibility, acceptability and more confidence in CAM were the cause for only 1.8% of participants (Table 2).

Table (2): Knowledge and causes of use of CAM among studied population

Knowledge and Causes of CAM use	*Number*	*Percent*	*Confidence interval*
Knowledge about CAM (n=873)			
Participants have knowledge	657	75.26	72.40-78.12
Participants have no or some knowledge	216	24.74	21.88-27.60
Sources of knowledge (n=657)			
Media	360	54.79	50.98-58.60
Relatives and friends	207	31.51	27.96-35.06
Health educational organization	45	6.85	4.92-8.78
books, lectures, workshops and internet	45	6.85	4.92-8.78
Use of CAM for themselves or their family			
Participants usually use CAM	36	4.12	2.80-5.44
Participants sometimes use CAM	333	38.14	34.92-41.36
Participants never use CAM	504	57.73	54.45-61.01
Talking on CAM with patients	216	24.74	21.88-27.60
Advice patients to use CAM	252	28.87	25.86-31.88
Causes of CAM use*			
Minimal side effects	432	43.29	40.22-46.36
Religious beliefs	216	21.64	19.09-24.19
Effectiveness of CAM	171	17.13	14.79-19.47
Low cost	144	14.43	12.25-16.61
Failure of conventional medicine	117	11.72	9.72-13.72
Others#	18	1.80	0.97-2.63

#Others include; easy accessible, acceptable and more confidence.
**Each participant may check more than one answer.*

The most common diseases for which patients use CAM were; backache, joint pain, abdominal colic and flatulence, knee pain, influenza and common cold, anxiety, migraine, hypertension, depression, diabetes mellitus, obstetric and gynaecological disorders (18.45%, 14.56%, 12.62%, 10.36%, 8.09%, 7.12%, 6.8%, 5.18%, 4.53%, 3.88% and 3.56% respectively). While the least diseases for which CAM used were renal failure, eye infection, asthma and cancer and malignancy (1.62%, 1.29%, 1.29% and 0.65% respectively) (Table 3).

Table (3): Diseases for which CAM used

*Diseases for which CAM used**	*Number*	*Percent*	*Confidence interval*
Backache	513	18.45	17.01-19.89
Joint pain	405	14.56	13.25-15.87
Abdominal colic and flatulence	351	12.62	11.39-13.85
Knee pain	288	10.36	9.23-11.49
Influenza & common cold	225	8.09	7.08-9.10
Anxiety	198	7.12	6.16-8.08
Migraine	189	6.8	5.86-7.74
Hypertension	144	5.18	4.36-6.00
Depression	126	4.53	3.76-5.30
Diabetes mellitus	108	3.88	3.16-4.60
Obstetric & gynecological disorders	99	3.56	2.87-4.25
Renal failure	45	1.62	1.15-2.09
Eye infection	36	1.29	0.87-1.71
Asthma	36	1.29	0.87-1.71
Cancer and malignancy	18	0.65	0.35-0.95

**Each participant may check more than one answer.*

The most commonly used CAM practices by health workers were spiritual healing as prayer and roquia (73.2%), honey and bee products (65.98%), herbal products (47.42%), food supplements (45.36%), hijama (38.14%), acupuncture and massage therapy (about 19%). Among CAM practices rarely used; reflexology, energy medicine, magnetic therapy, ozone therapy, aromatherapy, camel milk and urine and cauterization (Table 4).

DISCUSSION

Definition of CAM was explained to all participants in the current study before fulfilling questionnaires to avoid confusion and misconception about CAM meanings. The sample technique was planned on scientific basis to be representative of population with low cost. The response rate was 97.0% and this was high compared with the previous studies. However, there were some limitations in the present study. It represented mid-Delta region only and hence results cannot be generalized to all Egyptian regions due to different cultures, habits and believes in different areas of Egypt. At the same time, Lack of similar local studies on CAM makes it difficult to ensure about the credibility of results.

Religious affiliations and prevailing local culture may be reflected in prevailing CAM practices. Our studied health workers reported a high use of spiritual healing as prayer and roquia, honey and bee products, herbal products, food supplements and hijama, which are both highlighted health practices in the Holy Qura'n and Honored Sunnah. Studies from Saudi Arabia and Gulf countries have, however, shown a similar or slightly different situation. General Practitioners (GPs) in Doha, Qatar were more familiar with diet therapy and food supplements, acupuncture, and massage,[22] whereas in the United Arab Emirates (UAE) preference of health professionals was given to herbal products, acupuncture, and homeopathy.[21] On the other hand, Western countries show a distinctly different portrait of CAM use and knowledge of health workers: 86% had knowledge of hypnosis, 79% of acupuncture, 59% of homeopathy, 47% of osteopathy, and only 19% of herbal medicines.[16]

Table (4): Most important CAM modalities used by health workers

CAM modalities	*Commonly used*		*Usually used*		*Neutral*		*Sometimes used*		*Rarely used*	
	No.	%	No.	%	No.	%	No.	%	No.	%
Spiritual healing as prayer and roquia	639	73.2	72	8.24	108	12.37	18	2.06	36	4.12
Honey and bee products	576	65.98	189	21.65	63	7.22	9	1.03	36	4.12
Herbal products	414	47.42	171	19.59	162	18.56	63	7.22	63	7.22
Food supplements	396	45.36	171	19.59	81	9.28	90	10.31	135	15.40
Hijama	333	38.14	153	17.53	99	11.34	153	14.43	162	18.56
Acupuncture	171	19.59	162	18.56	144	16.49	162	18.56	243	27.89
Massage therapy	162	18.56	135	15.46	171	19.59	162	18.56	243	27.89
Cauterization	117	13.4	135	15.46	162	18.56	171	19.59	828	32.99
Camel urine and milk	90	10.31	36	4.12	72	8.25	54	6.19	621	71.13
Aromatherapy	45	5.15	81	9.28	144	16.49	144	16.49	459	52.54
Ozone therapy	36	4.12	63	7.22	117	13.4	180	20.62	477	54.64
Magnetic therapy	36	4.12	63	7.22	72	8.5	171	19.59	631	60.82
Energy therapy	27	3.09	45	6.19	72	8.25	153	17.53	567	64.95
Reflexology	27	3.09	18	2.06	45	5.15	162	18.56	621	71.13

In the current study, 24.74% reported poor knowledge about CAM compared with 39% of the general practitioners in Doha, Qatar.[22] In a study among fellows of the Michigan chapter of the American Academy of Paediatrics, majority of paediatricians believed a small percentage of their patients were seeking alternatives to conventional medicine, half would consider referring patients for CAM.[23]

Our study findings of 57.73% of health workers never utilized CAM is very similar to the reported CAM utilization worldwide.[24,25] The present study showed that 28.87% of health workers advise patients to use CAM and 24.74% of physicians talk with their patients on CAM. Some recent surveys reported a similar pattern.[26,27] Our low rates may be attributed to the absence of specific CAM centers in Egypt like The NCCAM in USA and KSA and the lack of knowledge and training of physicians in CAM. Recognition or legitimization of certain CAM practices may encourage physicians to advise and refer patients to CAM practitioners.[28] Only 24.74% of physicians in the present study initiated a discussion of the potential harm and benefits of CAM therapies with their patients, which is in agreement with published data.[29,30]

Among causes of CAM use in the present study was agreement of health workers about safety (43.29%) and effectiveness (17.13%). Primary health care physicians in Saudi Arabia reported agreement rates of 23.36% and 28.93% for safety and efficacy of CAM therapies, respectively, which is similarly to the majority of Dutch GPs who did not believe in the effectiveness of many alternative therapies, particularly herbal medicines and nutritional supplementation.[31] The physicians' agreement about safety and effectiveness varies from one country to another depending on culture, knowledge, and legitimacy in a country. Unavailability of reliable information, data, and evidence are all important factors for the widespread lack of belief and confidence in CAM within the medical profession.[16]

Different media, relatives, and friends as main sources of CAM knowledge for health workers in our study are considered devastating. Of health professionals in the present study, only 6.85% take their knowledge from educational academies

compared with 29.08% of health professionals in Saudi Arabia. This may indicate lack of medical curricula in CAM. In addition, 6.85% of participants take their knowledge from books, lectures, workshops and internet. This was unexpected where many licensed electronic databases (e.g. Natural Medicine Comprehensive Database, http://www.naturaldatabase.com) have been available several years ago. Therefore, educational campaigns should be initiated through lectures, seminar series and other activities demonstrating and highlighting the tools associated with those databases. The surge of information available to the public in the media and the internet is reflected on patients' need for guidance and direction. Physicians may be a source of such knowledge as they are turned to frequently by some of their patients for seeking advice.[14]

CONCLUSION AND RECOMMENDATIONS

There is an increasing interest in CAM knowledge among health workers. Most of them depend on the media, relatives and friends as their main sources of information. Most of physicians are reluctant in talking with their patients on CAM or referring patients to CAM practitioners. Safety, religious beliefs, effectiveness, low cost and chronic pain are important determinant factors for seeking alternative care. Religious practices as as prayer and roquia, honey and bee products, herbs and hijama are the most prevalent CAM practices in the area. Provision of tuition, educational courses, continuing medical education and postgraduate educational opportunities on CAM modalities are essential. Evidenced sources of CAM information must be available and easily accessible for health workers.

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