Complementary Therapies in Medicine (2014) 22, 304—310

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevierhealth.com/journals/ctim

Asking patients the right questions about herbal and dietary supplements: Cross cultural perspectives

Eran Ben-Arye[a,b,c,d,*], Inbal Halabi[b], Samuel Attias[e,f,g], Lee Goldstein[h], Elad Schiff[e,f]

[a] Department of Family Medicine, Complementary and Traditional Medicine Unit, Technion-Israel Institute of Technology, Haifa, Israel
[b] Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel
[c] Clalit Health Services, Western Galilee District, Haifa, Israel
[d] Integrative Oncology Program, The Oncology Service, Lin Medical Center, Israel
[e] Department of Internal Medicine, Bnai Zion Hospital, Haifa, Israel
[f] Department of Integrative Surgery Service, Bnai Zion Hospital, Haifa, Israel
[g] School of Public Health, University of Haifa, Haifa, Israel
[h] Clinical Pharmacology Unit, Internal Medicine C, Haemek Medical Center, Afula, Israel Affiliated to the Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel

Available online 11 January 2014

KEYWORDS
Doctor—patient communication;
Dietary supplements;
Traditional medicine;
Safety;
Complementary alternative medicine;
Herbs

Summary
Background: Use of dietary supplements (DS) during hospitalization carries risks such as reducing drug treatment efficacy and increasing peri-operative complications due to DS—drug interactions and DS side effects. In this study, we aimed to develop socio-cultural-sensitive patient histories to detect DS use amongst hospitalized patients from different backgrounds.
Research design and methods: Prospective cohort study of hospitalized patients from June 2009 through March 2010, using mixed quantitative (questionnaires), and qualitative (semi-structured interviews) research methodology to detect DS use.
Results: Data were provided by 691 of 895 patients (response rate 77.2%). Of these, 359 (51.9%) reported using DS in the previous year. 168 (46.8%) disclosed DS use following a standard question on DS consumption. 191 (53.2%) respondents disclosed DS use only following further questioning utilizing DS-related keywords. Leading questioning techniques that facilitated admitting DS use included: naming common DS (50.6% disclosure rate), and using traditional/herbal medicine (THM) related keywords (41.3% disclosure rate) such as infusions, teas, herbs picked in the garden. A logistic multivariate regression model indicated that disclosure of DS use, by using THM related keywords was associated with non-Jewish religion [EXP(B) = 3.57, 95% C.I. 1.70—7.50, $p = 0.001$], dwelling in rural areas ($p = 0.004$), and having a lower degree of education ($p = 0.01$).

* Corresponding author at: Department of Family Medicine, Complementary and Traditional Medicine Unit, Technion-Israel Institute of Technology, Haifa, Israel. Tel.: +972 52 870 9282; fax: +972 4 851 3059.
E-mail address: eranben@netvision.net.il (E. Ben-Arye).

0965-2299/$ — see front matter
http://dx.doi.org/10.1016/j.ctim.2014.01.005

Conclusions: Improved history taking regarding DS use in hospitalized patients can be accomplished by using specific keywords that address socio-cultural diversities as in the following question: ''Do you use any *natural*, *folk*, *traditional*, *grandma remedies*, *herbs picked in the garden*, *infusions* or *herbal teas* to improve your health?.

Introduction

Dietary supplements, as defined in most countries, include minerals and vitamins as well as herbs intended to supplement the diet by increasing the total dietary intake, or a concentrate, metabolite, constituent, extract, or combination of any of the aforementioned ingredients.[1] The use of dietary supplements (DS) during hospitalization has lately attracted clinical interest due to their widespread use as well as potential benefits and risks.[2,3] In the US, data from the 2002 to 2007 Adult Complementary and Alternative Medicine File to the National Health Interview Survey (NHIS) indicate an increased number of adults that ever used herbs or supplements involving 55.1 million persons in 2007).[4] DS use has social—cultural aspects [e.g. increased use in Asians, American Indians and Alaskan natives][5] which may also influence the type of DS used. Raji et al. studied community-dwelling elderlies in Texas and found that non-Hispanic whites use more vitamin—mineral supplements while black ethnicity was associated with more herbal use.[6] The prevalence of DS use in the hospital setting varies in different countries ranging from 15% in Canada[7] to 50% and 60% in Italy[8] and Australia.[9] In Israel, Goldstein and her colleagues reported that although 27% of patients hospitalized in two hospitals used herbal/DS, 94% of the patients had not been *asked* specifically about herbal consumption by the medical team.[10] Also, only 23% of the hospital's medical files of patients who used DS had any record of such use. In the US general population, the proportion of adult users who disclosed DS use to their health care provider rose, from 33.4% in 2002 to 45.4% in 2007. Although the number of studies on DS use in US hospitals is limited, preliminary studies in surgical and oncological arenas suggest rates of non-disclosure ranging from 33% to 52%.[11—13] In California, Leung et al. surveyed 2560 pre-surgical patients in five hospitals and found that 56.4% of DS users did not inform the anesthesiologists before surgery of DS use and that only half of the patients stopped DS use before surgery.[14] Mehta et al. analyzed the non-disclosure aspect according to the 2002 NHIS data and found social—cultural correlation of lower disclosure rates of DS use in Hispanic and Asian American adults compared with non-Hispanic white Americans.[15] A limited number of studies considered the disclosure aspect from the hospital physicians' perspective. In Spain, 78% of 105 surgeons and anesthesiologists reported that they did not ask patients about herbal use.[16] Limited communication regarding complementary and alternative medicine (CAM) and DS between patients and the health care professions in surgical care was also documented in a Swedish national survey among university hospitals.[17]

Non-disclosure of DS use may not only hamper doctor—patient communication but may also have significant implications in the hospital setting. From a safety-risk perspective, DS cause concern of adverse events[18] during hospital admission for several reasons. First, the DS may cause adverse reactions (e.g. serotonin syndrome risk related with *Hypericum perforatum*),[19] and may interact with medical treatment. DS—drug interactions may include St. John's wort causing reduced concentration of oral oxycodone.[20] Co-ingestion of coenzyme Q 10 or ginger in patients treated with warfarin increasing the risk of bleeding.[21] Potential hypoglycemic effects of herbs (e.g. ginseng), cardiovascular instability (e.g. ephedra), and potentiation of the sedative effect of anesthetics (e.g. kava and valerian).[22] The potential for adverse DS effects has lead scholars in the field to recommend routine screening of hospitalized patients for use of DS.[23—25] The competence of health care professionals to obtain an accurate anamnesis is fundamental and is emphasized in communication skill courses at medical schools, and in the lifelong training of physicians. Communication skills should take into account many factors, including socio-cultural differences in language and health terminology/concepts. Questioning patients regarding CAM use is no different than questioning on other health aspects. In hospital settings these communicational tasks may be more challenging due to the following reasons: acute medical conditions with time-limited communication[26]; lack of previous acquaintance (compared with primary care setting); and, in addition, patients may perceive the hospital as a bastion of conventional care that is less tolerant of CAM[27] making them less willing to disclose CAM use; or simply due to patients' perception of DS and CAM use as non-important or irrelevant to their medical care during the out-of-ordinary life context of hospital admission.[28] In addition, the topic of DS/CAM is underemphasized in physicians training in general[29] and knowledge concerning appropriate wording in history taking regarding CAM in variable populations has not been established.

In this study, we assessed which questions facilitate detection of DS use in hospitalized patients from diverse socio-cultural backgrounds with the goal of developing a simple and cultural-sensitive communication tool for this setting.

Research design and methods

The study was designed as a prospective cohort study of patients hospitalized in 11 departments of a public teaching hospital in Israel. The hospital has 450 beds, and serves a diverse population of rural and urban Jews and non-Jews. The study took place between June and March 2009. The ethics committee of the Medical Center reviewed and approved the protocol in accordance with the Helsinki Declaration.

Elaboration of the questionnaire: The questionnaire was developed in a stepwise manner by a multi-disciplinary team of researchers that included family and internal medicine