Journal of Herbal Medicine 10 (2017) 59–63

Contents lists available at ScienceDirect

Journal of Herbal Medicine

journal homepage: www.elsevier.com/locate/hermed

Research paper

Characteristics of herbal medicine users among internal medicine patients: A cross-sectional analysis

Matthew J. Leach[a,b], Romy Lauche[b,c,*], Anthony Lin Zhang[b,d], Holger Cramer[b,c], Jon Adams[b], Jost Langhorst[c], Gustav Dobos[c]

[a] Department of Rural Health, University of South Australia, Adelaide, Australia
[b] Australian Research Centre in Complementary and Integrative Medicine (ARCCIM), Faculty of Health, University of Technology Sydney, Sydney, Australia
[c] Department of Internal and Integrative Medicine, Kliniken Essen-Mitte, Faculty of Medicine, University of Duisburg-Essen, Essen, Germany
[d] School of Health and Biomedical Sciences, RMIT University, Melbourne, Australia

ARTICLE INFO

Keywords:
Attitude
Chronic illness
Complementary medicine
Herbal medicine
Internal medicine
Utilisation

ABSTRACT

Background: Herbal medicine is among the most frequently used complementary medicines. This study aims to identify the socio-demographic and health-related predictors of herbal medicine utilisation among patients with chronic internal medicine conditions admitted to inpatient care.

Methods: Patients referred to a German integrative medicine clinic were asked whether they had ever used herbal medicine for their primary medical diagnosis, and whether they experienced benefits or harm. Socio-demographic characteristics, health behaviour, medical diagnosis, health status, mental health, satisfaction with health, and health locus of control were determined as potential predictors of herbal medicine use.

Results: Of 2105 respondents, 41.9% reported herbal medicine use for their primary medical complaint, with 57.4% of them reporting perceived benefits and no harm due to use. Herbal medicine use was positively associated with female gender, at least high school education, a diagnosis of fibromyalgia, lung disease or sub-threshold depression, high internal health locus of control and avoidance of fast food, and was negatively associated with spinal pain. High satisfaction with life and high internal health locus of control were positively associated with perceiving herbal medicine as helpful. Whilst, being a smoker and diagnosed with headaches or irritable bowel syndrome had a negative association with the use of herbal medicine.

Conclusion: Herbal medicine utilisation among patients admitted to integrative inpatient care is common. While predictors of herbal medicine use appear to be in line with previous findings, there is a need for more in-depth examination of patients' motivations for the use of herbal medicine to further the understanding of their health behaviours and needs.

1. Introduction

Herbal medicine has long been used for the prevention and treatment of a wide range of medical conditions, as well as for general health enhancement (Wu et al., 2014; Zhang et al., 2008). In addition to broad indications of use, herbal medicine is also one of the most frequently used complementary medicines in Europe (Eardley et al., 2012; Frass et al., 2012), Singapore (Lim et al., 2005), Australia (Xue et al., 2007) and the US (Barnes et al., 2004; Clarke et al., 2015).

Previous studies have identified a number of factors associated with herbal medicine use including female gender, higher education, higher socioeconomic status and the presence of certain health conditions, such as menopausal symptoms and musculoskeletal disorders (Eardley et al., 2012; Frass et al., 2012). However, in Germany, very few studies have been undertaken that provide in-depth examination of the predictors of herbal medicine use, or the reasons why patients choose to use these medicines.

Understanding the determinants of herbal medicine use can generate important insights into the behaviours and needs of health consumers, which will be helpful in shaping and improving future policy, education, and practice and health service delivery. In recognizing the value of such research and addressing the significant research gap in

Abbreviations: CAM, complementary and alternative medicine; HADS, hospital anxiety and depression scale; FLZ, Fragebogen zur Lebenszufriedenheit (satisfaction with life questionnaire); ICD, international classification of diseases; GKÜ, Gesundheitsbezogene Kontrollüberzeugungen (health locus of control); SPSS, statistical package for social sciences; WHO, World Health Organisation

* Corresponding author at: Australian Research Centre in Complementary and Integrative Medicine University of Technology Sydney, 235-253 Jones Street, Ultimo NSW 2007 Australia.
E-mail address: romy.lauche@uts.edu.au (R. Lauche).

http://dx.doi.org/10.1016/j.hermed.2017.06.005
Received 15 June 2016; Received in revised form 7 June 2017; Accepted 28 June 2017
Available online 29 June 2017
2210-8033/

this area, this paper reports the findings of a cross-sectional study examining the socio-demographic and health-related predictors of herbal medicine use among patients with chronic internal medicine conditions admitted to integrative inpatient care in Germany.

2. Material and methods

2.1. Design

This descriptive cross-sectional survey formed part of an internal quality assurance program that evaluated the impact of integrative treatment on the health outcomes and quality of life of patients admitted to the Department of internal and integrative medicine – a clinical setting for patients with internal diseases, which applies both conventional and complementary therapies (Lauche et al., 2012) – at an acute-care, urban university hospital in Germany. While the department is likely to attract patients who are generally interested in integrative medicine, patients have to be referred to the department by their general practitioner. The costs of attending the integrative medicine clinic are covered by German statutory health insurance as well as many private health insurance companies and as such, treatment is not likely to be limited by personal treatment preference or socioeconomic class.

2.2. Participants

The study employed a convenience sampling technique whereby all patients referred to the Department of internal and integrative medicine between January 2001 and January 2004 were invited to participate. All patients were adults diagnosed with a chronic internal medical condition (Lauche et al., 2012), and had been referred to the department by a general practitioner for a two-week (minimum) period of inpatient treatment. The majority of patients referred to the hospital were severely affected by their disease conditions (Lauche et al., 2012), and had a history of unsuccessful treatments prior to admission. No other inclusion or exclusion criteria were applied.

2.3. Outcomes

The self-administered, pencil-and-paper based survey comprised 36 items, and had an estimated completion time of 30 min. The survey was designed to measure six core outcomes, each of which are defined below.

2.3.1. Herbal medicine use

The Freiburg Questionnaire on Attitudes on Naturopathy was administered to identify the range of complementary medicine used by participants to treat the primary medical complaint prior to receiving integrative inpatient treatment (Huber et al., 2004). For the analyses presented here, only herbal medicine use was evaluated, for which the following question was asked: *Have you ever used herbal medicine for your primary medical complaint?* (Response options: yes, no). Patients who reported the use of herbal medicine for the management of their primary medical complaint were also asked: *How helpful was herbal medicine for your primary medical complaint?* (Response options: helpful, not helpful, harmful).

2.3.2. Socio-demographic characteristics

Participant age and gender were sourced from hospital records. Additional socio-demographic information regarding level of education (i.e. less than high school, high school graduate), employment status (i.e. full-time, part-time, unemployed), and relationship status (i.e. in a relationship or not in a relationship) was collected via the survey. These variables served as possible predictors of herbal medicine use, together with the following health behaviours: smoking status (i.e. current smoker, past smoker, non-smoker), alcohol intake (i.e. abstainer, less than twice weekly, at least twice weekly), and fast food consumption (i.e. abstainer, less than twice weekly, at least twice weekly).

2.3.3. Health status and clinical characteristics

The patient's main diagnosis was ascertained by the referring doctor and recorded as an ICD-10 diagnosis code (World Health Organization, 2013). For this analyses, diagnoses were categorised as: a) osteoarthritis, b) arthritis, c) fibromyalgia, d) spinal pain, e) headache, f) other pain, g) hypertension, h) ischaemic cardiac disease, i) irritable bowel syndrome, j) inflammatory bowel disease, k) lung disease, or l) other, more rare conditions. The patient's general health status was also assessed on a 5-point scale and categorised as poor, fair, good, very good or excellent.

2.3.4. Mental health

Anxiety and depression were assessed using the 14-item Hospital Anxiety and Depression Scale (HADS) (Barth and Martin, 2005; Herrmann et al., 1995; Snaith, 2003). Scores ranging from 8 to 10 points were defined as sub-threshold anxiety or depression, while scores of 11 and higher were defined as threshold anxiety or depression.

2.3.5. Satisfaction with health and life in general

Satisfaction with health and satisfaction with life in general were assessed using two items of the questionnaire for life satisfaction (Fragebogen zur Lebenszufriedenheit, FLZ) (Fahrenberg et al., 2000). Each item included a 5-point Likert scale response set, using the anchors of 1 = very unsatisfied and 5 = very satisfied. Higher scores were indicative of greater satisfaction with health or life in general. Every patient was categorised as having either high (i.e. above the median) or low (i.e. below the median) satisfaction with health and high or low satisfaction with life in general.

2.3.6. Health locus of control

Health locus of control was assessed using the German health locus of control scale (Gesundheitsbezogene Kontrollüberzeugungen, GKÜ) (Westhoff, 1993), a 9-item German modified short-form of the English language multidimensional health locus of control scale, the most commonly used scale to assess health locus of control (Wallston and Wallston, 1981; Wallston et al., 1978). Response options ranged from "strongly disagree" to "strongly agree". The instrument assessed three dimensions of health locus of control beliefs (3 items each), including internal (i.e. health status perceived as controlled by self), external-social (i.e. health status perceived as controlled by others) and external-fatalistic (i.e. health status perceived as depending on luck or destiny). For every patient, each dimension was categorised as either high (i.e. above the median) or low (i.e. below the median).

2.4. Procedures

Participants were notified of the study by staff members upon their arrival at the clinic, and questionnaires were then distributed to participants immediately upon admission. A participant information sheet accompanied the questionnaires, which outlined the purpose of the study, what the study involved, the participant's rights, and researcher's contact details. The questionnaires were filled out by the patients on their own, and then collected by clinic staff once completed by the patient a few days later while patients were still in the hospital. Pertinent patient data were also collected from hospital records (as described below). Patients were free to decline participation in the study.

2.5. Statistical analysis

Statistical analysis was performed using IBM SPSS® software (version 22.0, IBM, USA). Chi square tests were used to compare socio-demographic, clinical and psychological characteristics between