



A longitudinal analysis of self-prescribed complementary and alternative medicine use by a nationally representative sample of 19,783 Australian women, 2006–2010



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ABSTRACT

Background: Complementary and alternative medicine (CAM) use is increasingly popular amongst general populations around the world with women constituting substantial CAM users. However, self-prescribed CAM use does raise potential safety concerns and so it is important to identify those risk factors associated with self-prescribed CAM use.

Methods: Data was obtained from the Australian Longitudinal Study on Women's Health (ALSWH). Longitudinal data analyses were conducted on questionnaire data from the 1973–78 cohort ($n=9,145$) and the 1946–51 cohort ($n=10,638$), collected over the period 2006–2010.

Results: In the 1973–78 cohort, use of self-prescribed CAM was 73.2% in 2006 and 75.3% in 2009. For the 1946–51 cohort, use of self-prescribed CAM was 73.9% in 2007 and 74.7% in 2010. There were similar levels of use of individual self-prescribed CAM, with the exception that the use of herbal medicine was much higher among the 1946–51 cohort (20% vs. 27%). There was a substantial increase over three years in the use of vitamins/minerals in both cohorts (21% and 19%, respectively). In contrast, there was a considerable decline over three years in use of aromatherapy oils in both cohorts (34% and 28%, respectively).

Conclusion: Self-prescribed CAM use is popular amongst women in Australia and it is important that conventional practitioners providing women's health care be cognizant of such use amongst their patients. In order to ensure effective practice, there is a need for further research to explore women's decision-making and experiences around self-prescribed CAM use.

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1. Introduction

The use of complementary and alternative medicine (CAM) – a group of diverse health beliefs, therapies and products not traditionally associated with conventional medicine – has emerged as a significant health service issue in contemporary societies.^{3,5} Numerous large scale surveys have identified CAM as increasing in popularity in North America, Australia and Europe^{7,10,16,28} and such trends have generated much interest among health professionals and policy-makers.^{21,34}

Previous research has consistently identified women as core consumers of CAM^{2,13,19} and findings indicate that the use of CAM is common with regards to a number of women's health issues including pregnancy,^{4,20,26} menopause,^{15,40} breast cancer³² and depression.^{12,43} In Australia, research has identified CAM use as substantial for both young (aged 18–23) and mid-age (aged 45–50) women.^{9,39}

Although the evidence base of CAM use is growing, there is a relative lack of longitudinal research to track and describe the changing use of CAM over time or during the trajectory of a health condition.^{11,12,14,15,18,23,38} In addition, many surveys on CAM use do not differentiate between consultation with a CAM practitioner and self-prescribed CAM use.²⁹ Here we define self-prescribed CAM as the use of CAM products and practices (e.g., vitamins or minerals, aromatherapy oil, herbal medicine, yoga, meditation) which do not require the professional guidance or prescription of a health-care provider.¹ Nevertheless, the existing limited evidence suggests

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potential significant differences between the prevalence rates of the use of these two broad CAM types. For instance, an Australian study on menopausal women revealed that 39% of women consulted CAM practitioners, while 75% used self-prescribed CAM.³⁵ Another survey discovered that 62% of American adults used CAM in 2002 but only 12% consulted a CAM practitioner.¹⁷ Research in Australia appears to support this finding with a national study estimating that while 44% of adults visited a CAM practitioner, 69% of adults used one or more non-prescription CAM product in a 12 month period.⁴⁴

In addition to the difference between prevalence rates, there is some evidence suggest that purposes for use and psychological predictors of use may be different between practitioner-based and self-prescribed CAM use. In their study on CAM use among women with breast cancer³⁰ found that although both practitioner-based and self-prescribed CAM were used by the patients to improve well-being, the latter was more often used to influence the course of cancer. The same research also found that while openness to experience predicted use of provider-based CAM, use of self-prescribed CAM was predicted by clinical distress.³⁰ Despite such research, self-prescribed CAM use remains an under-researched topic and we currently know little about the longitudinal use of self-prescribed CAM. In direct response to this research gap, this paper reports findings from the first longitudinal analyses of self-prescribed CAM use amongst a nationally representative sample of young and mid-age Australian women, with the specific aim of identifying the factors associated with self-prescribed use of CAM for young and mid-age Australian women over a three year period.

2. Methods

2.1. Sample

This research was conducted as part of the Australian Longitudinal Study on Women's Health (ALSWH) which was designed to investigate multiple factors affecting the health and well-being of women over a 20-year period. Women in three age groups ('young' 18–23, 'mid age' 45–50 and 'older' 70–75 years) were randomly selected from the national Medicare database.²⁴ The focus of the study reported in this paper is women from the young and mid-age ALSWH cohorts. The baseline surveys, comprising of 14,779 and 14,099 women in the young and mid-age cohorts respectively, were conducted in 1996 and the respondents have been shown to be broadly representative of the national population of women in the target age groups.²⁵ Attrition and retention statistics of the ALSWH cohorts over time, along with reasons for attrition from the ALSWH have been reported elsewhere,^{36,45} but briefly those who have dropped out of the study differed from those who remained in the study on some demographic characteristics, including having a lower level of education, being more likely to have children, being more likely to be stressed about money, and to be smokers. Analyses for this paper are restricted to the most recent surveys for the young cohort (survey 4 in 2006 and survey 5 in 2009) and the mid-age cohort (survey 5 in 2007 and survey 6 in 2010). Note that the older cohort was excluded from analyses because they were not asked about their use of self-prescribed CAM.

2.2. Measures of demographic characteristics

Postcode of residence at the time of the baseline survey was used to classify area of residence as urban or non-urban. Women were asked about their current marital status, their highest educational qualification and whether they had private health insurance with ancillary cover (including CAM practitioners).

2.3. Measure of health status

Women were asked how often they experienced a list of symptoms in the previous twelve months. For the young cohort, this list included: allergies or hay fever or sinusitis, headaches or migraines, back pain, constipation, vaginal discharge or irritation, severe tiredness, urine that burns or stings, leaking urine, haemorrhoids, other bowel problems, and sleeping problems. For the mid-age cohort, the list included: allergies or hay fever or sinusitis, indigestion, chest pain, headaches or migraines, severe tiredness, stiff or painful joints, back pain, haemorrhoids, other bowel problems, hot flushes, night sweats, and leaking urine. Women were also asked whether a doctor had ever told them that they had any of the chronic medical conditions listed. For the young cohort, this list included: low iron (iron deficiency or anaemia), depression, anxiety disorder, urinary tract infection, and cancer (not skin cancer). For the mid-age cohort, the list included: arthritis, diabetes, heart disease, hypertension, low iron, asthma, anxiety disorder, depression, and cancer (not skin cancer).

2.4. Health service utilisation

The women were asked if they had consulted with a range of CAM practitioners (i.e., chiropractor, massage therapist, acupuncturist, naturopath/herbalist, or other CAM practitioner) in the previous 12 months.

2.5. Outcome measures

The women were asked how often they had used self-prescribed CAM (vitamins or minerals, yoga or meditation, herbal medicines, aromatherapy oils, or Chinese medicine) for their own health, in the previous twelve months.

2.6. Statistical analyses

Longitudinal regression modeling was conducted using generalized estimating equations (GEEs). GEEs are an extension to generalized linear models (GLMs), so for this study the GEEs can be thought of as being an extension to logistic regression models. Logistic regression models can only analyse the data cross-sectionally, however the 'extension' component of the GEE model allows for the analysis of the data longitudinally, thus reflecting the relationship between the longitudinal development of dependent variable and the longitudinal development of the independent variables over time⁴¹. All the demographic, health status, health services utilisation and self-prescribed CAM variables listed above were entered into a GEE model and then a stepwise backward elimination process was employed, to eventually produce the most parsimonious model for each self-prescribed CAM separately. In response to the large sample size, a p -value <0.005 was adopted for statistical significance. All analyses were conducted using statistical program Stata.

3. Results

In 2006, there were 9145 women from the young cohort who responded to the survey, and 8200 responded to the survey in 2009. For the mid-age cohort, 10,638 women responded to the survey in 2007 and 9748 responded to the survey in 2010.

In the young cohort, use of self-prescribed CAM was 73.2% ($n=6695$) in 2006 and 75.3% ($n=6174$) in 2009. For the mid-age cohort, use of self-prescribed CAM was 73.9% ($n=7857$) in 2007 and 74.7% ($n=7280$) in 2010. Table 1 shows the use of self-prescribed CAM by the young and mid-age cohorts. The majority of women from both cohorts consumed vitamins/minerals and this

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