The profile of women who consult alternative health practitioners in Australia

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COMPLEMENTARY and alternative medicine (CAM) is used by a substantial proportion of the population in Australia and other countries.[1] Recent estimates suggest Australians spend $2.3 billion a year on CAM.[2] Thus, there is a need for information (including data on CAM consumption and users) to inform general practitioner decision-making about CAM practice and referral.[3]

Most research examining CAM use has been undertaken outside Australia, and has been regionally focused,[4] with small numbers of participants.[5] A few larger studies in the United States and Canada have identified several key variables predicting CAM use.[6-12] CAM users tend to use CAM in conjunction with conventional health services,[11] are more likely to be married,[8,11] be aged 35–49,[8,9] have a higher income[8,10,11] and level of education,[6,7,8,11] be employed full time,[9] have poorer health,[6,10] and are more likely to be women.[9,11,12] Similar findings have been reported in the United Kingdom[13] and Europe.[14] The only large studies of CAM users in Australia (about 3000 participants) support these findings.[2,15]

CAM consumption in Australia remains under-researched.[16] In particular, we know little about the profile of female CAM users. In this article, we describe the characteristics of CAM users from a nationally representative sample of more than 40 000 Australian women.

METHODS

Sample

This research was conducted as part of the Australian Longitudinal Survey of Women's Health, which was designed

ABSTRACT

Objectives: To compare the characteristics of complementary and alternative medicine (CAM) users and non-users among Australian women.

Design: Cross-sectional postal questionnaire conducted during 1996, forming the baseline survey of the Australian Longitudinal Study on Women's Health.

Participants: Women aged 18–23 years ($n = 14\,779$), 45–50 years ($n = 14\,099$) and 70–75 years ($n = 12\,939$), randomly selected from the Health Insurance Commission database, with over-sampling of women from rural and remote areas of Australia.

Main outcome measures: Consultation with an alternative health practitioner in the 12 months before the survey.

Results: Women in the mid-age cohort were more likely to have consulted an alternative health practitioner in the previous year (28%) than women in the younger cohort (19%) or older cohort (15%). In all age groups, CAM users were more likely than CAM non-users to reside in non-urban areas, to report poorer health, have more symptoms and illness, and be higher users of conventional health services.

Conclusions: Women in non-urban Australia are more likely to use CAM but do so in parallel with conventional health services.

to investigate factors affecting the health and well-being of women over a 20-year period. Women in three age groups ("young", 18–23 years; "mid-age", 45–50 years; "older", 70–75 years) were randomly selected from the Health Insurance Commission database, with over-representation of women in rural and remote areas.[17] The baseline survey was conducted in 1996, and the respondents (14 779 young, 14 099 mid-age, and 12 939 older women) are representative of the national population of women in the target age groups.[18]

Demographic characteristics

Postcode of residence at the time of the baseline survey was used to classify residence as urban or non-urban. Women were asked about marital status and highest completed educational qualification. Women in the young and mid-age groups were asked about employment status.

Health status

The Short-Form 36 (SF-36) Quality of Life questionnaire was used to measure health status and quality of life (physical functioning, role limitation caused by physical factors, bodily pain, general health, vitality, social functioning, role limitation caused by social factors, and mental health).[19] Women were asked how often in the previous 12 months they experienced any of a list of symptoms (such as back pain, tiredness, difficulty sleeping). Women were also asked whether a doctor had ever told them that they had any of the chronic medical conditions listed, such as diabetes and hypertension. Questions about having a Pap test, hysterectomy, major personal illness or menopause (mid-age group) in the previous year, and history of smoking and alcohol use were also included.

The number of symptoms and chronic medical conditions varied for

1: Demographic characteristics of women by CAM use

	Young		Mid-age		Older	
	CAM user (n=2833)	Non-user (n=11865)	CAM user (n=3930)	Non-user (n=10042)	CAM user (n=1853)	Non-user (n=10809)
Area of residence*†‡						
Urban	50%	56%	31%	38%	36%	41%
Non-urban	50%	44%	69%	62%	64%	59%
Marital status						
Married/de facto	22%	23%	81%	83%	57%	57%
Separated/ divorced/ widowed	1%	1%	15%	14%	40%	40%
Never married	77%	76%	4%	3%	3%	3%
Education*†						
No formal	2%	3%	16%	19%	33%	35%
School only	65%	69%	50%	48%	51%	51%
Trade/diploma	22%	17%	20%	19%	12%	10%
Tertiary	11%	11%	14%	14%	4%	4%
Employment status*†						
Full time paid	36%	31%	34%	34%	—	—
Part time paid	21%	19%	32%	31%	—	—
Work without pay	1%	0	10%	7%	—	—
Home duties only	4%	7%	14%	18%	—	—
Study	28%	31%	1%	1%	—	—
Other	10%	12%	9%	9%	—	—

CAM = Complementary and alternative medicine. CAM use is defined as consulting an alternative health practitioner in the previous 12 months. * Significant association with CAM use in young women (P< 0.005). † Significant association with CAM use in mid-age women (P< 0.005). ‡ Significant association with CAM use in older women (P< 0.005).

each cohort. For the young cohort, there were 17 symptoms and 6 chronic medical conditions, in the mid cohort there were 25 symptoms and 14 chronic medical conditions, and in the older cohort there were 23 symptoms and 15 chronic medical conditions.

Health service use

The women were asked about their frequency of use in the previous 12 months (for their own health) of a range of healthcare practitioners. The list of practitioners included family doctor or another GP, hospital doctor (eg, in outpatients or casualty), a specialist doctor, and an allied health professional. Women who reported at least one consultation with an alternative health practitioner were defined as CAM users.

Other questions asked whether they had been admitted to hospital in the previous 12 months and how many different types of medication they had

used in the previous four weeks prescribed by a doctor, bought without prescription, or for chronic illness.

Statistical analyses

Estimates of the proportion of women reporting use of CAM, by age cohort, were weighted (area adjusted) to correct for over-sampling from rural and remote areas.[18] Within each age cohort, the demographic characteristics, health status and health service use of CAM users and non-users were compared by means of χ^2 tests for categorical variables and t tests for continuous variables.

Note that, despite non-normal distributions of some continuous variables, t tests (as opposed to equivalent non-parametric tests) were used because of the large sample size.[20] In addition, also in response to the large sample size and multiple comparisons, P< 0.005 was adopted for statistical significance.[21]

Both weighted (area adjusted) and unweighted statistical analyses were per-

formed. However, as similar results were obtained, only the unweighted results are reported for ease of interpretability. All analyses were conducted with SAS.[22]

RESULTS

Australian women appear to use CAM as part of a repertoire of healthcare consumption. Response rates to the question about consulting an alternative health practitioner were 99.5% (14 698/14 779) for the young, 99.1% (13 972/14 099) for the mid-age, and 97.9% (12 662/12 939) for the older cohort. We estimate that CAM users constitute 19%, 28% and 15% of the young, mid-age and older cohorts, respectively (after adjustment for the over-sampling of rural women).

Demographic characteristics

Comparisons of CAM users and non-users for demographic characteristics are shown in Box 1. In all three cohorts, CAM users were more likely to reside in non-urban areas, but there were no differences according to marital status. CAM users in the young and mid-age groups had higher levels of education and were more likely to be employed.

Health status

Box 2 compares CAM users and non-users by health status. CAM users appear to have poorer health than non-users. They experience a greater number of symptoms sometimes or often, and rate their physical and mental health as poorer, particularly their general health and bodily pain.

Young and mid-age CAM users reported lower vitality than non-users. Among the older women, CAM users had lower levels of physical functioning and were more limited in their ability to perform their normal activities because of their physical health. In contrast, younger CAM users were more limited by their emotional problems.

In all three cohorts, a greater proportion of CAM users had experienced a major illness in the previous 12 months. For the mid-age cohort, a greater proportion of CAM users were going through menopause.

2: Women's health status by CAM use

	Young		Mid-age		Older	
	CAM user (*n*=2833)	Non-user (*n*=11865)	CAM user (*n*=3930)	Non-user (*n*=10042)	CAM user (*n*=1853)	Non-user (*n*=10809)
Mean number of symptoms (SD)* † §	5 (3)	4 (3)	8 (4)	7 (4)	7 (4)	6 (4)
Mean number of chronic conditions (SD)* †	1 (1)	0 (1)	1 (1)	1 (1)	2 (2)	2 (2)
Mean score on SF-36 dimensions (SD)						
General health† ‡	64 (22)	69 (20)	70 (21)	73 (20)	64 (22)	66 (22)
Physical functioning‡ §	90 (15)	90 (16)	84 (19)	86 (18)	61 (26)	63 (26)
Bodily pain† ‡ §	68 (23)	76 (21)	65 (24)	73 (23)	59 (26)	66 (27)
Role: physical† ‡ §	77 (34)	84 (29)	74 (38)	82 (33)	52 (43)	59 (42)
Role: emotional† ‡ §	65 (39)	72 (37)	74 (38)	79 (35)	73 (38)	76 (37)
Mental health† ‡ §	66 (19)	69 (18)	71 (18)	73 (18)	75 (17)	77 (17)
Social functioning† ‡ §	72 (24)	77 (23)	79 (25)	83 (23)	78 (27)	82 (25)
Vitality† ‡ §	53 (20)	58 (20)	56 (22)	60 (21)	58 (21)	60 (21)
Major personal illness in previous year† ‡ §	15%	8%	12%	9%	17%	13%
Menopause in previous year‡	—	—	39%	34%	—	—
Current smokers‡	30%	31%	15%	19%	6%	7%
Consume alcohol at risk levels‡	25%	25%	6%	7%	4%	4%

CAM = Complementary and alternative medicine. CAM use is defined as consulting an alternative health practitioner in the previous 12 months. * Number of possible symptoms or chronic conditions varies for age cohorts. † Significant association with CAM use in young women (*P* < 0.005). ‡ Significant association with CAM use in mid-age women (*P* < 0.005). § Significant association with CAM use in older women (*P* < 0.005). A non-parametric equivalent of the *t* test (Wilcoxon test) was also used to compare CAM users and non-users for the number of symptoms, number of chronic conditions and the SF-36 dimensions. Siimilar results were obtained in all comparisons.

There were no differences in smoking and alcohol consumption in the younger and older cohorts, but mid-age CAM users were less likely than non-users to be smokers or drink alcohol at risk levels.

Use of health services

Box 3 shows the use of health services. Compared with non-users, CAM users were more frequent visitors to GPs, outpatient/casualty departments and specialists. Except in the mid-age cohort, a greater proportion of CAM users were admitted to hospital in the previous 12 months.

Mid-age and older CAM users were more likely than non-users to have had a hysterectomy and to have had a recent Pap test.

Although there were no differences in the use of prescription medications, there were striking differences in the use of non-prescription medications, particularly among the older women. Overall rates of use of non-prescription medications were much higher in the younger and mid-age cohorts than in the older cohort. In the older cohort, CAM users were more likely to use medication to help them sleep, whereas in the young cohort, CAM users were more likely to be taking medication for a chronic illness.

DISCUSSION

This study is the largest examination of CAM users in the world to date. It is also the first national research to focus on CAM consumption in relation to women's health and the first to chart the profile of female CAM users across Australia.

The study reveals that CAM use is not restricted to a particular subgroup of women in Australia. CAM use differed by age group, with mid-age women more likely than their younger or older counterparts to be CAM users. CAM users were more likely than non-users to live in non-urban areas, have experienced a major illness, have more symptoms and be more limited by their health. They were more likely to report taking medication for chronic illness, and there was a strong relation between bodily pain and use of CAM. These characteristics are similar to those found in more targeted studies of CAM use.[2,8]

Previous studies have shown that most CAM use is integrated into care when conventional treatments have proven ineffective or undesirable.[12] Similarly, our findings show women in Australia do not use CAM to replace conventional treatment. On the contrary, these women are high users of GP, specialist and hospital services. These findings suggest women pragmatically select treatments from the different options to best fit particular medical and health problems.

Our results do not enable us to determine whether women use CAM when conventional treatments have proven ineffective or undesirable, or whether they use CAM to complement contemporaneous orthodox treatment.

In either case, the use of both CAM and conventional treatments is important for those providing primary medical care. There is potential for drug interactions between conventional medicines and some complementary treatments.[23] Patient safety is jeopardised because many CAM users do not inform their medical practitioner about their CAM use[8] and GPs underestimate their patients' use of other medicines.[3,7]

The interpretation of our findings is limited by several survey design issues. First, we defined CAM use as consultation with an alternative health practitioner, and did not include the use of self-prescribed CAM medications, although this is considerably more extensive than the use of alternative health practitioners.[2] Our definition may have led to the under-reporting of CAM use, although it is in line with that used in previous CAM research.[4,10]

In addition, we did not define the therapists listed, and provided only a few examples, including chiropractor, naturopath, acupuncturist and herbalist. Respondents may have different interpretations of the term "alternative health practitioner" and may have var-

3: Women's health service utilisation by CAM use

	Young		Mid-age		Older	
	CAM user (n=2833)	Non-user (n=11865)	CAM user (n=3930)	Non-user (n=10042)	CAM user (n=1853)	Non-user (n=10809)
Number of GP visits						
0*†	4%	7%	7%	10%	4%	4%
1–2*†	25%	33%	34%	39%	14%	16%
3–4*†	28%	28%	27%	25%	25%	27%
5–6*†	20%	17%	16%	13%	24%	23%
⩾7*†	23%	15%	16%	13%	33%	30%
Number of outpatient/casualty visits						
0*†	68%	75%	82%	85%	75%	79%
1–2*†	24%	19%	14%	11%	15%	13%
⩾3*†	8%	5%	4%	4%	10%	8%
Number of specialist visits						
0*†‡	63%	72%	55%	61%	42%	49%
1–2*†‡	23%	19%	29%	26%	31%	29%
⩾3*†‡	14%	9%	16%	13%	27%	22%
Hospital stay*‡	21%	18%	17%	16%	27%	23%
Hysterectomy†‡	—	—	25%	22%	40%	33%
Pap test in past 2 years†‡ (no hysterectomy)	—	—	85%	79%	44%	34%
Prescription medications*†	60%	57%	53%	52%	82%	82%
Medication for nerves†	—	—	8%	6%	14%	12%
Medication to help sleep†‡	—	—	9%	7%	21%	17%
Medication for chronic illness*	11%	7%	20%	19%	38%	36%
Use non-prescription medications*†‡	68%	58%	68%	56%	51%	34%

CAM = Complementary and alternative medicine. CAM use is defined as consulting an alternative health practitioner in the previous 12 months. * Significant association with CAM use in young women ($P < 0.005$). † Significant association with CAM use in mid-age women ($P < 0.005$). ‡ Significant association with CAM use in older women ($P < 0.005$).

ied in the range of therapists they included under this heading.

These limitations are principally because our research was a sub-study taken from a larger project, which was not primarily designed to determine CAM use. Given these limitations, it is important that further research explore the relation between CAM use and women's health issues.

COMPETING INTERESTS

None identified.

ACKNOWLEDGEMENTS

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