

Patterns of complementary and alternative medicine use and health literacy in general practice patients in urban and regional Australia

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Background and objective

The majority of Australians use complementary and alternative medicine (CAM). Despite concerns about safety, patterns of health literacy and CAM use in Australian general practice are unknown.

Methods

Pre-existing questionnaires assessing health literacy and CAM use (HLQ and I-CAM-Q) were distributed by eight practices across four Australian states to 800 patients aged 18 years and older for self-completion. Regression modelling and cluster analysis were applied to the data.

Results

The response rate was 47% ($n = 374$), the mean age was 53 years and 68% of participants were female. Two-thirds of participants used some form of CAM in the previous 12 months, and 60% believed CAM aided wellbeing. There were significant associations between cluster membership, education, sex and CAM use.

Discussion

Our findings suggest CAM use is a complex phenomenon, associated with gender and education. We demonstrated a cluster of female patients with high CAM use and lower health literacy warranting further research.

Complementary and alternative medicine (CAM) has become an established part of healthcare for many Australians.¹ CAM is estimated to be used by up to two out of three Australians, and accounts for \$3.5 billion in expenditure every year.^{1,2} It is noteworthy that the annual patient expenditure for CAM exceeds expenditure on Pharmaceutical Benefits Scheme (PBS) medications by \$1.8 billion.¹ 'Complementary' is generally taken to mean alongside western medicine, whereas 'alternative' is taken to mean instead of.

CAM spans a wide variety of treatments, ranging from herbal supplements to practitioner-based therapies. It is a difficult area to define, which is one reason why estimates of the prevalence of CAM use in the general population range from 9% to 65%.³ It has generally been accepted that most CAM users tend to be female²⁻⁴ and are well educated,^{2,3,5} but controversy exists about other contributing factors. Several Australian studies have found that women in rural areas are more likely to use CAM than their urban counterparts,⁵⁻⁷ whereas other studies have found the opposite.^{2,4} CAM use has been well studied in subgroup populations,^{4,8,9} but little is known about its use in the adult population of Australia.

Although most CAM is thought to be safe and some is evidence-based, concerns for doctors include a lack of reliable information and issues regarding regulation.¹⁰ Indeed, general practitioners (GPs) often feel ill-equipped to deal with questions from patients regarding CAM use and effectiveness,¹¹ and are frequently cautious about recommending or discussing CAM because of worries about efficacy, regulation and safety.^{10,12} Other concerns include the perceived lack of reliable information to doctors and consumers.^{13,14} The potential impact of health literacy status on CAM use by Australians has not been studied. However, the use of CAM by up to two out of three Australians

strongly suggests an unmet need that stretches beyond the scope of traditional medicine, and understanding patterns of CAM use and health literacy among general practice attendees is important.

Health literacy is a measure of an individual's capacity to seek, understand and use healthcare information within the healthcare setting.¹⁵ Low levels of health literacy are associated with poorer health outcomes.¹⁶ However, high levels of health literacy may not necessarily lead to wise decision-making.¹⁷ The World Health Organization (WHO) defines health literacy as the cognitive and social skills that determine the motivation and ability of individuals to gain access to, understand and use information in ways that promote and maintain good health.

Australian primary care research suggests health literacy is a better predictor of health status than education, employment, socioeconomic status, race or gender.³¹ However, many Australian adults have suboptimal health literacy,^{24,25} and this has been shown to be associated with poorer health outcomes, independent of other socioeconomic factors.¹⁶ In his review of health literacy, Nutbeam concluded that patients with high literacy levels alone may not be able to apply their knowledge in areas outside of their expertise.¹⁷ Therefore, people with high literacy levels may still make unwise health-related decisions.¹⁷ However, health literacy, like literacy, can be fostered through education.¹⁷ Given the prevalence of CAM use, what we know about a lack of reliable information regarding CAM and the impact of poor health literacy on health outcomes, the aim of this study was to describe patterns of health literacy and CAM use by using cluster analysis in a sample of general practice patients in urban and regional Australia.

Methods

Materials

Our questionnaire was developed from two pre-existing questionnaires, the health literacy questionnaire (HLO)^{18,19} and international questionnaire to measure

use of complementary and alternative medicine (I-CAM-Q).²⁰ The HLO is a 44-item Australian tool designed to measure health literacy.^{18,19} It was developed using comprehensive cognitive and psychometric testing. The HLO assesses nine constructs regarding health literacy across the following subscales, each with four to six items:

- Feeling understood and supported by healthcare providers
- Having sufficient information to manage health
- Actively managing health
- Social support for health
- Appraisal of health information
- Ability to actively engage with healthcare providers
- Navigating the healthcare system
- Ability to find good health information
- Understand health information well enough to know what to do.

Each construct is scored by calculating the mean result of the four-point or five-point Likert-type responses of the construct's subscale. The first five scales use a one to four range ('Strongly disagree', 'Disagree', 'Agree' or 'Strongly agree'); scales six to nine use a one to five range ('Cannot do', 'Very difficult', 'Quite difficult', 'Quite easy' or 'Very easy').

The I-CAM-Q, developed by an international consortium, is an English-language questionnaire designed to identify the use of CAM across national and cultural groups.²⁰ It comprises four main areas regarding:

- visits to complementary practitioners
- complementary treatments received from medical doctors
- use of herbal and dietary supplements
- use of self-help.

Each area in the I-CAM-Q is assessed in two ways. First, binary ('Yes' or 'No') data are collected to assess the reasons for CAM use (eg acute illness, long-term health condition, improve wellbeing). Second, for each CAM practice that a respondent had used, how helpful the treatment was thought to be was scored in a Likert-type response item with a one to four range ('Very',

'Somewhat', 'Not at all', 'Do not know').

To these questionnaires, we added four binary-response ('Yes' or 'No') questions regarding beliefs relating to CAM use (eg CAM will treat my illness). We piloted the combined questionnaire in a single practice with 137 respondents and demonstrated the tool had suitable usability.

Ethics

The University of Wollongong's ethics committee granted ethics approval (ethics number: HE15/096).

Recruitment

Recruitment was through convenience sampling, initially through the Illawarra and Southern Practice Research Network (ISPRN), New South Wales, and then through snowballing interstate. The aim was to recruit 10 practices from a variety of Australian Standard Geographical Classification – Remoteness Areas (ASGC-RA) jurisdictions.²¹ Practices were initially approached by the research team via telephone. Participating practices were supplied with information kits that contained information for staff about the research protocol and information for patients in the forms of a poster and handouts, which could be placed in the waiting room. Each practice was asked to distribute 100 questionnaires, over a three-day period, to patients who routinely attended the practice. Patients had the option of completing the questionnaires in the waiting room and returning these to reception staff, or taking them home and either returning them to reception or posting them to the research team via a reply paid envelope.

Analysis

For analyses, we collapsed the use of CAM into a dichotomous outcome variable of 'Used CAM' or 'Not used CAM'. Design-adjusted chi square was used to compare groups. Adjusting for the two-stage sampling design, we used univariate generalised linear mixed models (GLMM) to investigate the associations between CAM use and demographic

variables (eg age, sex, rurality, education). We included independent variables with univariate associations at $P < 0.05$ in a final multivariate GLMM. The internal reliability of the HLQ was assessed using Cronbach's alpha. The authors of the HLQ recommend analysing HLQ results with cluster analysis to provide a health literacy profile for sub-populations of health consumers.¹⁹ Cluster analysis is an exploratory statistical method for identifying groups (clusters) of cases or individuals based on similarities in pre-defined variables. We undertook a two-step cluster analysis to characterise groups of respondents within practices on the basis of their demographics (age and sex), whether English was spoken at home, highest level of education, HLQ scale scores, and 'Used CAM' or 'Not used CAM'. Design-adjusted linear mixed modelling (LMM) was used to compare the mean HLQ scale scores for each cluster. IBM SPSS Statistics 22 (IBM Corp, New York, NY, USA) was used for the cluster analysis and R 3.1.1 (R Foundation for Statistical Computing, Vienna, Austria) was used for all other analyses. A P value < 0.05 was regarded as statistically significant.

Results

Eight general practices, ranging from ASGC-RA 1–3 locations (major city to outer regional) participated. The response rate was 47%, with 374 participants returning surveys. The mean age of participants was 53 years of age, with a range of 18–93 years. Sixty-eight per cent of participants were female and 50% identified as having at least one of eight chronic health conditions. Demographic data are summarised in Table 1.

Two-thirds (66%) of patients used some form of CAM in the previous 12 months, be it a visit to a CAM practitioner, the use of CAM remedies or supplements, or self-help techniques. Seventy-five per cent of women used CAM compared with 47% of men ($P < 0.01$). Of participants who had a university education, 76% had used CAM. When patients were asked about their

beliefs regarding CAM, 60% agreed that CAM improved wellbeing, 27% agreed that CAM can treat illness and 13% felt that CAM could prevent sickness.

The main reason for the visit to the GP was for management of a long-term illness (51%). Acupuncture treatments were delivered by GPs to 5% of participants.

Table 1. Practice and participant description

Practice description			
State	Practice	RA category	Responses
New South Wales	A	1	83
Queensland	B	1	89
Queensland	C	2	6
Queensland	D	2	18
Queensland	E	2	3
Queensland	F	2	40
Western Australia	G	3	50
Tasmania	H	2	85
Total participants			374 (47%)
Participant demographic data			
Age		Mean 53 years	
		Range 18–93	
Gender			
• Female		257 (68%)	
• Male		119 (32%)	
Born in Australia		297 (78.8%)	
Aboriginal and Torres Strait Islander		7 (1.9%)	
Live alone		71 (18.8%)	
Speaks English at home		372 (98.4%)	
Education			
Primary school or less		7 (1.9%)	
High school (not completed)		49 (13%)	
High school (completed)		95 (25.2%)	
TAFE/Trade		95 (25.2%)	
University		128 (34%)	
One of eight chronic health conditions			
Arthritis		83 (22%)	
Back pain		86 (22.8%)	
Heart problems		36 (9.5%)	
Asthma		37 (9.8%)	
Cancer		19 (5.0%)	
Depression or anxiety		72 (19.1%)	
Diabetes		26 (6.9%)	
Stroke		3 (0.8%)	
Total		187 (49.6%)	
No longstanding illness or disability		225 (59.7%)	
Private health insurance: Yes		235 (62.3%)	
Healthcare card: Yes		162 (43%)	

No homeopathy was provided by GPs in our study. The main reason for visiting a CAM practitioner was also for a long-term illness (52%). CAM medicines and self-help practices were mostly used to improve wellbeing (50% and 62% respectively), but if all forms of CAM were combined, the overall main reason for use was to improve wellbeing (52%). While 81% of patients found seeing their GP to be very helpful, this proportion dropped to 71% for CAM practitioner visits, and to 60% and 56% for self-help practices and CAM medicines respectively (Appendix 1; available online only).

Sex and education were associated with CAM use at $P < 0.05$ in univariate analyses. In the fully adjusted GLMM, female sex ($P < 0.001$) and university education (compared with completed high school education; $P < 0.001$) were independently associated with increased CAM use (Table 2).

The HLQ demonstrated good internal reliability, with Cronbach's alpha = 0.95 for the tool overall. The HLQ subscales demonstrated alpha values between 0.80 and 0.89, except for subscale 3 (alpha = 0.64). After excluding cases with missing data, cluster analysis identified three clusters of respondents on the basis

of their demographics, CAM use and health literacy:

- Cluster 1 (n = 93; 29%; mean age: 54 years) – 75% female (n = 70); approximately two-thirds had used CAM (n = 63; 68%) and 38.7% (n = 36) had attended university
- Cluster 2 (n = 115; 36%; mean age: 48 years) – 100% (n = 115) female; 100% used CAM and 40% had attended university
- Cluster 3 (n = 113; 35%; mean age: 52 years) – 33.6% female (n = 38); 36% used CAM and 33% (n = 37) had completed TAFE/trade qualifications as their highest level of education.

Design-adjusted chi square showed a significant overall difference in CAM use between clusters ($P < 0.001$). LMM demonstrated that respondents in Cluster 1 had significantly higher mean scores for all HLQ subscales compared with respondents in Clusters 2 and 3 ($P < 0.001$; Table 3).

Discussion

Our findings show CAM use in Australian general practice patients to be at comparable levels to prior studies in this field, with two-thirds of participants using CAM. Our data are in concordance

with previously published studies that reported CAM use being more common in women^{2,3,10} and those who are well-educated.^{2,3,11} We did not find a difference in CAM use between urban and regional locations, and no evidence of an association with age.

However, we extended the results of previous research by using HLQ scores in combination with demographic factors in a cluster analysis. Membership of these clusters was significantly associated with health literacy levels in a complex pattern of CAM use, education and gender groupings. To our knowledge, there has been no previous Australian study that has examined patterns of CAM use and health literacy levels. A US study found that adequate health literacy was associated with increased CAM use among Caucasians, but not African Americans.²² As an extension of these findings, we propose that complex social or health belief factors are at play in behaviours regarding CAM use in combination with health literacy in Australia. On the basis of this study's cluster analysis, the group with the highest CAM remedy or supplement use (100%) had significantly lower health literacy scores than our reference group (68% CAM use), as did

Table 2. CAM use: Univariate and adjusted regression results

Independent variable	Univariate regression			Adjusted regression		
	Odds ratio	95% confidence interval	Significance	Odds ratio	95% confidence interval	Significance
Age	0.99	0.97, 1.0	0.07	–	–	–
Sex*	3.31	2.09, 5.28	<0.001	3.47	2.18, 5.74	<0.001
Rural†	1.11	0.60, 2.17	0.69	–	–	–
Highest education:						
• (TAFE/trade)‡	0.63	0.35, 1.14	0.12	0.70	0.38, 1.30	0.26
• Highest education (High school completed)†	0.40	0.22, 0.71	<0.01	0.38	0.20, 0.70	<0.01
• Highest education (High school not completed)†	0.55	0.27, 1.15	0.11	0.70	0.33, 1.52	0.37
• Highest education (Primary School or less)†	0.24	0.04, 1.17	0.07	0.32	0.05, 1.72	0.19

*Reference category male

†Reference category non-rural (RA1)

‡Reference category university

the group with the lowest CAM remedy or supplement use (36%). The difference in CAM use between the clusters was significant. Whether social, ideological or as yet to be defined, the reasons underlying these differences warrant further investigation.

This study has limitations. Our sample was recruited by convenience sampling from the population of general practice attendees, and these findings may not be representative of the general population.

Of the 374 patients who responded, 68% were female, which may have biased the results. The questionnaire-based methodology presumed that all participants had a reasonable level of literacy. Recent reports into Australian literacy and numeracy have found that just under half of all Australians may not have basic levels of literacy.¹⁸ Therefore, we may have missed a very important group of the population. CAM is difficult to define, and participants may have been unsure

as to whether they were using CAM. The I-CAM-Q, to our knowledge, has not been validated in the Australian population and, while the wording was edited slightly to complement Australian terminology, this may not have negated issues following translation into the Australian context.

Implications for general practice

Our study highlights that CAM use is prevalent among Australian health service users and needs to be considered in

Table 3. Cluster description

Variable (In order of importance in predicting cluster membership)	Cluster		
	One n = 93 (29%)	Two n = 115 (35.8%)	Three n = 113 (35.2%)
Navigating the healthcare system Mean HLQ item score	4.69	3.96*	3.92*
Ability to find good health information Mean HLQ item score	4.74	4.06*	3.93*
Active engagement with healthcare providers Mean HLQ item score	4.76	4.07*	3.98*
Reading and understanding health information Mean HLQ item score	4.82	4.14*	4.11*
Having sufficient information Mean HLQ item score	3.52	2.97*	2.90*
Sex (female)	70 (75.3%)	115 (100%)	38 (33.6%)
Social support Mean HLQ item score	3.54	2.91*	2.92*
Actively managing health Mean HLQ item score	3.44	2.95 [†]	2.81*
CAM use (Yes)	63 (67.7%)	115 (100%)*	41 (36.3%)*
Healthcare provider support Mean HLQ item score	3.61	3.03*	2.99*
Critical appraisal Mean HLQ item score	3.31	2.85*	2.69*
Mean age (years)	53.7	47.7	51.5
Do you speak English at home (Yes)	91 (97.8%)	113 (98.3%)	110 (97.3%)
Highest level of education:			
• University	36 (38.7%)	46 (40%)	33 (29.2%)
• TAFE/trade	21 (22.6%)	28 (24.3%)	37 (32.7%)
• High school completed	24 (25.8%)	30 (26.1%)	27 (23.9%)
• High school not completed	11 (11.8%)	9 (7.8%)	15 (13.3%)
• Primary or less	1 (1.1%)	2 (1.8%)	1 (0.9%)

HLQ, health literacy questionnaire
*P < 0.001

medical consultations. The results of our data show that patterns of CAM use and health literacy are complex. Therefore, GPs should not assume that a person who understands and uses health information well is not using CAM. Conversely, our results also demonstrated that highly educated CAM users may have relatively low health literacy, raising concerns about the appropriate use of CAM. A thorough history, patient education and focusing on ensuring that patients understand their health remain cornerstones of medical consultations, and may result in more judicious use of CAM, and shared understanding between patients and GPs. We recommend that further research using qualitative methods be undertaken to help understand the commonalities in the clusters we have identified, their underlying health beliefs and their associations with CAM use.

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Appendix 1. CAM usage and beliefs (I-CAM-Q)**Providers seen by patients in the past 12 months**

	Yes, n (%)	No, n (%)
Physician	356 (96.0)	15 (4.0)
Chiropractor	48 (17.9)	220 (82.1)
Homeopath	2 (0.8)	245 (99.2)
Acupuncturist	27 (10.6)	228 (89.4)
Herbalist	3 (1.2)	243 (98.8)
Spiritual healer	4 (1.6)	242 (98.4)

Main reason patient last saw the provider

	For an acute illness or condition n (%)	For a long-term health condition n (%)	To improve wellbeing n (%)
Physician	112 (37.8)	150 (50.7)	34 (11.5)
Chiropractor	7 (16.7)	23 (54.8)	12 (28.6)
Homeopath	0 (0)	0 (0)	2 (100)
Acupuncturist	3 (13.6)	13 (59.1)	6 (27.3)
Herbalist	0 (0)	2 (50.0)	2 (50.0)
Spiritual healer	1 (33.3)	1 (33.3)	1 (33.4)
CAM practitioners	11 (29)	34 (52)	20 (30.8)

Helpfulness to the patient to see the provider (if yes to previous question)

	Very n (%)	Somewhat n (%)	Not at all n (%)	Do not know n (%)
Physician	261 (81.3)	54 (16.8)	3 (0.9)	3 (0.9)
Chiropractor	30 (71.4)	12 (28.6)	0 (0)	0 (0)
Homeopath	1 (50.0)	1 (50.0)	0 (0)	0 (0)
Acupuncturist	16 (64.0)	9 (36.0)	0 (0)	0 (0)
Herbalist	4 (100.0)	0 (0)	0 (0)	0 (0)
Spiritual healer	2 (100.0)	0 (0)	0 (0)	0 (0)
CAM practitioners	53 (70.7)	22 (29.3)	0 (0)	0 (0)

Complementary treatments received by patients from physicians in the past 12 months

	Yes n (%)	No n (%)
Manipulation	18 (6.1)	277 (93.9)
Homeopathy	0 (0)	282 (100)
Acupuncture	16 (5.4)	278 (94.6)
Herbs	5 (1.8)	280 (98.2)
Spiritual healing	2 (0.7)	283 (99.3)

Appendix 1. CAM usage and beliefs (I-CAM-Q)**Main reason the patient last received this treatment (if yes to previous question)**

	For an acute illness or condition n (%)	For a long-term health condition n (%)	To improve wellbeing n (%)
Manipulation	2 (12.5)	11 (68.8)	3 (18.5)
Homeopathy	0 (0)	0 (0)	0 (0)
Acupuncture	7 (50.0)	6 (42.9)	1 (6.1)
Herbs	0 (0)	5 (100)	0 (0)
Spiritual healing	0 (0)	0 (0)	1 (100)

Helpfulness to the patient to receive this treatment from the physician (if yes in previous two questions)

	Very n (%)	Somewhat n (%)	Not at all n (%)	Do not know n (%)
Manipulation	11 (68.8)	5 (31.2)	0 (0)	0 (0)
Homeopathy	0 (0)	0 (0)	0 (0)	0 (0)
Acupuncture	12 (85.7)	2 (14.3)	0 (0)	0 (0)
Herbs	4 (100.0)	0 (0)	0 (0)	0 (0)
Spiritual healing	1 (100)	0 (0)	0 (0)	0 (0)

Complimentary treatments used by patients, including tablets, capsules and liquids

	Yes n (%)	No n (%)
Herbs or herbal medicine	51 (18.5)	224 (81.5)
Vitamins or minerals	170 (54.7)	141 (45.3)
Homeopathic	17 (7.0)	226 (93.0)
Other supplements	41 (17.1)	199 (82.9)

Main reason patient used complimentary treatment (if yes to previous question)

	For an acute illness or condition n (%)	For a long-term health condition n (%)	To improve wellbeing n (%)
Herbs or herbal medicine	7 (15.2)	21 (45.7)	18 (39.1)
Vitamins or minerals	11 (7.3)	56 (37.1)	84 (55.6)
Homeopathic	2 (15.4)	6 (46.2)	5 (38.4)
Other supplements	3 (7.1)	20 (47.7)	19 (45.2)
All CAM medicines	23 (9.2)	103 (41.2)	124 (49.6)

Helpfulness of the complimentary treatment to the patient (if yes in previous two questions)

	Very n (%)	Somewhat n (%)	Not at all n (%)	Do not know n (%)
Herbs or herbal medicine	23 (47.0)	22 (45.0)	1 (2.0)	3 (6.0)
Vitamins or minerals	81 (55.1)	42 (28.6)	4 (2.7)	20 (13.6)
Homeopathic	8 (61.5)	3 (23.1)	0 (0)	2 (15.4)
Other supplements	24 (64.9)	9 (24.3)	0 (0)	4 (10.8)
All CAM medicines	136 (55.5)	76 (30.6)	5 (2)	29 (11.8)

Appendix 1. CAM usage and beliefs (I-CAM-Q)**Self-help practices used by patients in past 12 months**

	Yes n (%)	No n (%)
Meditation	61 (21.0)	230 (79.0)
Yoga	53 (18.5)	234 (81.5)
Qigong	3 (1.1)	259 (98.9)
Tai Chi	12 (4.5)	255 (95.5)
Relaxation techniques	56 (19.9)	226 (80.1)
Visualisation	20 (7.6)	242 (92.4)
Attended traditional healing ceremony	3 (1.2)	255 (98.8)
Praying for own health	29 (10.9)	238 (89.1)

Main reason patient used this self-help practice (if yes in previous question)

	For an acute illness or condition n (%)	For a long-term health condition n (%)	To improve wellbeing n (%)
Meditation	5 (10.0)	16 (32.0)	29 (58.0)
Yoga	4 (8.5)	8 (17.0)	35 (74.5)
Qigong	0 (0)	2 (66.7)	1 (33.3)
Tai Chi	0 (0)	1 (11.1)	8 (88.9)
Relaxation techniques	2 (4.6)	15 (34.9)	26 (60.5)
Visualisation	1 (6.7)	5 (33.3)	9 (60.0)
Attended traditional healing ceremony	0 (0)	0 (0)	2 (100)
Praying for own health	4 (18.2)	9 (40.9)	9 (40.9)
All self-help practices	16 (8.4)	56 (29.5)	118 (62.1)

Helpfulness of the self-help practice to the patient (if answered yes in previous two questions)

	Very n (%)	Somewhat n (%)	Not at all n (%)	Don't know n (%)
Meditation	34 (70.8)	14 (29.1)	2 (4.1)	0 (0)
Yoga	28 (63.6)	15 (34.1)	1 (2.3)	0 (0)
Qigong	3 (60.0)	2 (40.0)	0 (0)	0 (0)
Tai Chi	7 (63.6)	4 (36.4)	0 (0)	0 (0)
Relaxation techniques	24 (50.0)	22 (45.8)	1 (2.1)	1 (2.1)
Visualisation	9 (47.4)	10 (52.6)	0 (0)	0 (0)
Attended traditional healing ceremony	2 (40.0)	3 (60.0)	0 (0)	0 (0)
Praying for own health	16 (66.7)	7 (29.2)	1 (4.1)	0 (0)
All self-help practices	123 (59.5)	77 (37.6)	5 (2.4)	1 (0.5)

Appendix 1. CAM usage and beliefs (I-CAM-Q)**Main reason patient used any form of CAM**

	For an acute illness or condition n (%)	For a long-term health condition n (%)	To improve wellbeing n (%)
All CAM use	37 (9.7)	144 (38.6)	193 (51.7)

Additional questions – Patient believes that complimentary therapy or medication will:

	Yes n (%)	No n (%)
Improve their sense of wellbeing	195 (59.8)	131 (40.2)
Treat their illness	89 (27.2)	238 (72.8)
Stop them from getting sick	43 (13.1)	284 (86.9)
None of the above	65 (20.0)	260 (80.0)