

ORIGINAL ARTICLE

The profiles of adults who consult alternative health practitioners and/or general practitioners

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Abstract

Objective. To compare the profiles of people visiting only a general practitioner (GP), those visiting only a practitioner of complementary and alternative medicine (CAM), and those visiting both (GP&CAM). **Design.** A comparative total population health survey in central Norway (HUNT 2). **Subjects.** A total of 54 448 persons 20 years of age and over who answered questions about their use of health services during the previous 12 months. **Variables.** Sociodemographic characteristics, self-perceived health, subjective health complaints, and a variety of common diseases. **Results.** Some 34 854 (64.0%) of those who answered the health service use question had visited only a GP, 837 (1.5%) only a CAM practitioner, and 4563 (8.4%) both during the last 12 months. The likelihood of being a CAM-only user as compared to a GP-only user was significantly increased ($p < 0.005$) if the participant was male; aged between 30 and 69; and without cardiovascular disease. The likelihood of being a GP&CAM user compared with a GP-only user was significantly increased ($p < 0.005$) for those who were female; aged between 30–59; had a higher education level; were non-smokers; had lower perceived global health; had a limiting chronic complaint; had experienced a health complaint during the last 12 months; had musculoskeletal disease; had a psychiatric complaint; and had hay fever. **Conclusion.** There were few CAM-only users and they differ from GP-only users by being male, aged 30–69, and without cardiovascular disease. Users of both GP&CAM were less healthy with more complaints and poorer self-reported health than GP- and CAM-only users.

Key Words: *Complementary therapies, family practice, family physicians, health services, Norway, population*

A number of studies from different countries have shown significant growth in complementary and alternative medicine (CAM) use [1,2]. The main focus has been either to compare CAM users with a general population [3–9]; or to describe CAM users among general practitioner (GP) [10–14] or emergency medicine patients [15] or those with specific conditions and illnesses [16,17]. Such comparisons suggest CAM users are most likely to be middle-aged females with a chronic condition and a higher education than non-CAM users.

Despite the valuable nature of such studies, a more interesting analysis is to directly compare CAM users with all conventional healthcare users. This comparison is preferable because it does not

There are no European studies comparing complementary and alternative (CAM) users with conventional healthcare users.

- In sum, 64.0% had visited only a general practitioner (GP), 1.5% only a CAM practitioner, and 8.4% both during the last 12 months.
- CAM-only users differ from GP-only users by being male, aged 30–69, and without cardiovascular disease.
- Users of both GP&CAM were less healthy with more complaints and poorer self-reported health than GP and CAM-only users.

include healthy non-users thereby allowing identification of specific predictors of CAM use over and above healthcare use more generally.

Some studies have compared CAM users and users of conventional healthcare [18,19]. Druss and Rosenheck explored the use of office-based and outpatient hospital-based physician visits in comparison with CAM use in the US [18], finding that patients who utilize both care systems were more likely to be female, white, and more educated than those using conventional medical services only.

No study to date has compared the profiles of CAM users and GP users that are based on population data – this paper reports a detailed profile of different healthcare user groups by employing data from a large population-based study in Norway. The aim was to explore the profile and the possible disparities among three different user groups (GP only, CAM only, and those who use GP&CAM) with regard to sociodemographic characteristics, self-perceived health, subjective health complaints, and a variety of common diseases.

Material and methods

Data were obtained from two postal questionnaires from a population-based cross-sectional health survey conducted in Nord-Trøndelag County, Norway (HUNT 2) between 1995 and 1997. All residents aged 20 years and over were invited to participate ($n=92,936$) and a total of 65 495 persons (70.5%) did so. Nord-Trøndelag county and its population is considered to be fairly representative of Norway in terms of geography, demographics, and occupational structure [19]. The average education level is somewhat lower than that for Norway in general and the largest town in the county has 21 000 inhabitants.

Healthcare user categories

The question about health service use read as follows: “In the course of the last 12 months, have you seen a (yes/no): General practitioner, Chiropractor, Homeopath, Other treatment-provider such as naturopath, reflexologist, layer on of hands, “healer”, “visionary”, etc.” Individuals who answered yes or no to at least one of the questions about health service use were included in the analysis and used in the denominator.

A GP-only user was defined as a subject who answered yes to question one and no to the other three questions. A GP&CAM user was defined as someone who answered yes to question one and to at least one of the three others. A CAM-only user

answered no to question one and yes to at least one of the other questions.

Demographics

Gender and age of participants were obtained from public registers. Marital status was obtained from a public register plus a question about cohabitation. Participants were asked to indicate their level of education attained, which was reclassified as compulsory school, middle-level education (including vocational education), and university degree.

The total score of the Hospital Anxiety and Depression Scale (HADS-T) [20] was measured and used as an indicator of the patients’ anxiety and worry about symptoms. To obtain an indication of an unhealthy lifestyle, participants were classified as smokers or non-smokers based on whether they were daily smokers of cigarettes. Those defined as being a recipient of social welfare benefit answered yes to receiving benefits under occupational rehabilitation, disability pension, unemployment benefits, and social security benefits. Sickness benefits (less than a year) and retirement pensions were not included.

Health status

Several measures of health status were used based on the following questions:

1. Global health: “How do you feel at present? (poor, fair, good, very good)”.
2. Recent health complaints (yes to one or more of these questions):
 - Have you in the last 12 months suffered from Nausea/Heartburn/Diarrhoea/Constipation/Palpitation/Breathlessness? (Never=No/Sometimes=Yes/Often=Yes)
 - Have you experienced any stiffness or pain in your muscles or joints that has lasted for more than three consecutive months during the last year? (Yes/No)
 - Have you in the last 12 months suffered from headache/migraine (Yes/No)
3. Chronic complaints: Do you suffer from any longstanding (for at least one year) limiting somatic or psychiatric illness, disease or disability? (Yes/No).
4. Cardiovascular disease (yes to one or more of these questions): Do you have or have you had Acute myocardial infarction/Angina pectoris/Stroke? (Yes/No)
- 5–8. Asthma, Diabetes, Epilepsy or Cancer: Do you have or have you had asthma/diabetes/epilepsy/cancer? (Yes/No)

9. Musculoskeletal disease (yes to one or more of these questions): Have you been diagnosed with Osteoporosis/Fibromyalgia/Arthritis/Arthroses/Ankylosing spondylitis/Other longstanding musculoskeletal disease? (Yes/No)
10. Psychiatric complaint: Do you have or have you had psychiatric complaints that you have sought help for? (Yes/No)
11. Chronic disease: Do you have or have you had any other longstanding disease? (Yes/No)
12. Injury: Have you ever had an injury that led to hospitalization?
13. Hay fever: Do you have hay fever? (Yes/no)

Statistical analysis

All data were analysed using SPSS, version 12.0.1 (SPSS inc. www.spss.com). Pearson chi-squared tests (see Table I) and multiple logistic regression (see Table II) were used to compare the different user groups. A t-test was used to compare mean HADS-T score (see Table I). Due to the size of the study, statistical significance was accepted at the 0.5% level ($p < 0.005$).

Results

A total of 54 448 (83.1%) of the HUNT 2 participants answered yes or no to at least one of the questions about health service use. Of these, 34 854 (64%; 95% CI 63.6–64.4%) had only consulted a GP during the previous 12 months (GP-only users), 837 (1.5; 1.4–1.6) were CAM-only users, while 4563 (8.4; 8.2–8.6) had consulted both types of practitioners (GP&CAM users).

The bivariate analysis in Table I shows that compared with GP-only users, GP&CAM users were more likely ($p < 0.005$) to be female; aged between 30 and 59; married/cohabiting; divorced/separated; have a higher level of education; receive social welfare; have a higher HADS-T score; have poorer self-reported health; have experienced a health complaint during the last 12 months; and have a chronic complaint than those not using CAM. Further, the GP&CAM users were more likely to have asthma, musculoskeletal disease, psychiatric complaints, chronic disease, hay fever, and an injury leading to hospitalization but were less likely to have cardiovascular disease and diabetes when compared with GP-only users.

In comparison with GP-only users, CAM-only users (see Table I) were more likely ($p < 0.005$) to be: male; aged between 30 and 59; married/cohabiting; divorced/separated; and had better self-reported health than those only using a GP. The CAM-only users were less likely to have had a chronic com-

plaint, asthma, cardiovascular disease, diabetes, and cancer than GP-only users.

When controlling all variables in Table II for each other, the odds that a participant was a GP&CAM user compared with a GP-only user was significantly increased ($p < 0.005$) if that individual was female (odds ratio (OR) 1.3); aged between 30 and 59 (OR 1.3–1.4 for the different age ranges); had a higher education level (OR 1.3); was a non-smoker (OR 1.3); had lower perceived global health (OR 1.4–3.6 for the different levels); had a limiting chronic complaint (OR 1.2); had experienced a health complaint during the last 12 months (OR 1.6); had a musculoskeletal disease (OR 1.3); had a psychiatric complaint (OR 1.4); and had hay fever (OR 1.3). GP&CAM users were less likely to have cardiovascular disease (OR 0.7) than GP-only users.

Compared with GP-only users and controlling all variables in Table II for each other, the likelihood of a participant having consulted only a CAM practitioner was significantly increased ($p < 0.005$) if that individual was: male (OR 1.7), aged between 30 and 69 (OR 2.0–3.0 for the different age ranges), and without cardiovascular disease (OR 2.7).

Discussion

Patients who had visited only a CAM practitioner were more similar to GP-only users than those who have visited both a GP and a CAM practitioner.

The main strengths of this study were that it was population based, with rigorous organization and a vast number of participants. These features allow for a thorough analysis of the various groups of healthcare users, which also includes individuals who report that they had visited only a CAM practitioner.

The prevalence of different healthcare use was based on self-reports, while self-medication use (both CAM and conventional) was not reported. Furthermore, this study focused on the use of health services during the preceding 12 months. Individuals classified as CAM-only users could have visited their GP prior to the 12-month period under study for a complaint for which they consulted the CAM practitioner during the study period. Taking this into account, the prevalence of CAM-only users might be over-reported in this study. Given the overall prevalence of CAM compared with GP use, we still hold that this misclassification had no decisive influence on the results.

Prevalence of healthcare use

The prevalence rates identified in this study were remarkably similar to those found in a US report [18] which found that close to 60% of the US

Table I. Prevalence of those who have been to only a general practitioner (GP), both a GP and a CAM practitioner (GP&CAM), and only a CAM practitioner (CAM) during the previous 12 months by sociodemographics and health status.

	Total n (incl. no visits)	p-value GP vs. GP&CAM	GP&CAM	GP	CAM	p-value GP vs. CAM
All (n)	(54 448)		8.4 (4563)	64.0 (34854)	1.5 (837)	
Sex						
Female	29 716	<0.001	9.9	68.5	1.4	<0.001
Male	24 732		6.5	58.6	1.7	
Age group						
20–29	7 071	<0.001	6.8	65.0	1.1	<0.001
30–39	9 505		9.2	62.3	1.6	
40–49	11 239		9.6	58.4	2.1	
50–59	9 382		9.9	62.1	1.8	
60–69	7 688		8.2	65.4	1.5	
70–79	7 131		5.9	72.1	1.1	
80+	2 432		5.8	73.2	0.9	
Marital status						
Married/cohabiting	41 491	<0.001	8.8	64.3	1.6	<0.001
Single	6 360		6.6	57.8	1.3	
Divorced/separated	2 045		10.2	63.8	2.2	
Widow(er)	4 434		6.5	70.3	1.0	
Education						
Compulsory school	18 833	<0.001	7.7	66.9	1.4	0.008
Middle level	22 319		9.0	62.9	1.6	
University	10 639		8.9	60.5	1.6	
Social welfare benefits	11 068	<0.001	10.5	68.2	1.5	0.350
Smokes cigarettes daily	14 345	0.958	8.3	63.8	1.5	0.443
HADS-T mean score	54 448	<0.001	9.0	7.8	7.6	0.418
Global health						
Very good	8 476	<0.001	4.4	54.6	1.5	<0.001
Good	30 699		7.2	62.1	1.7	
Fair	13 853		12.8	73.3	1.2	
Poor	962		18.2	71.0	1.9	
Recent complaint	42 684	<0.001	9.7	66.5	1.6	0.536
Chronic complaint	12 566	<0.001	12.9	71.0	1.4	0.002
Asthma	4 655	<0.001	11.0	71.5	1.2	0.004
Cardiovascular disease	4 267	<0.001	7.3	80.9	0.6	<0.001
Diabetes	1 680	<0.001	7.1	82.7	0.3	<0.001
Musculoskeletal disease	7 015	<0.001	13.4	70.3	1.4	0.021
Epilepsy	844	0.574	9.2	66.0	1.1	0.232
Psychiatric complaint	6 029	<0.001	15.1	69.6	1.5	0.415
Cancer	2 089	0.387	9.9	71.1	0.9	0.005
Another chronic disease	4 338	<0.001	12.7	70.3	1.2	0.020
Injury leading to hospitalization	9 628	0.001	9.3	63.7	1.6	0.740
Hay fever	9 439	<0.001	11.6	66.5	1.7	0.407

p-values are calculated for GP vs. GP&CAM and for GP vs. CAM respectively. Percentage of all participants within group (including those with no visits to GP or CAM).

population used only conventional medical services, that 6.5% visited both CAM and conventional medical services, while 1.8% used only CAM [18]. The present study identified 64.0%, 8.4%, and 1.5% prevalence rates for each of these healthcare user groups respectively suggesting the possibility that the use of CAM-only, of conventional medicine only, and of both CAM&GP may be relatively similar across Western cultures.

The study findings showed that the majority of CAM users also consulted a GP, which supports findings from previous population-based studies from different countries [2]. Notwithstanding this finding, it remains that a sizeable proportion of the population visits only CAM practitioners. This group may have health-maintenance and health-seeking behaviours that differ from other healthcare user populations. While population studies provide a

Table II. Adjusted odds ratio (Adj OR) from multivariate logistic regression models, with consultation with a general practitioner only (GP) and both a GP and a CAM practitioner (GP&CAM), and a general practitioner only (GP) and a CAM practitioner only (CAM) during the previous 12 months as dependent variables.

	GP vs. GP&CAM		GP vs. CAM	
	Adj OR ^a	95% CI	Adj OR ^a	95% CI
Sex				
Female	1.0	–	1.0	–
Male	0.8 ^b	(0.7, 0.8)	1.7 ^b	(1.4, 2.0)
Age group				
20–29	1.0	–	1.0	–
30–39	1.4 ^b	(1.2, 1.6)	2.0 ^b	(1.4, 2.8)
40–49	1.4 ^b	(1.2, 1.7)	3.0 ^b	(2.1, 4.2)
50–59	1.3 ^b	(1.1, 1.5)	2.8 ^b	(1.9, 4.1)
60–69	1.1	(0.9, 1.3)	2.2 ^b	(1.4, 3.5)
70+	0.8	(0.6, 1.0)	1.4	(0.8, 2.5)
Married/cohabiting				
Single	1.0	–	1.0	–
Divorced/separated	1.0	(0.9, 1.2)	1.2	(0.9, 1.6)
Widow(er)	0.9	(0.8, 1.1)	1.4	(0.9, 2.1)
	0.9	(0.7, 1.1)	0.7	(0.4, 1.3)
Education				
Compulsory school	1.0	–	1.0	–
Middle level	1.3 ^b	(1.2, 1.4)	1.0	(0.8, 1.3)
University	1.3 ^b	(1.2, 1.5)	1.0	(0.7, 1.2)
Social welfare benefits				
No	1.0	–	1.0	–
Yes	0.9	(0.8, 1.0)	1.2	(0.9, 1.5)
Smokes daily				
No	1.0	–	1.0	–
Yes	0.8 ^b	(0.7, 0.9)	0.8	(0.7, 1.0)
HADS-T score per unit	1.01	(1.00, 1.01)	1.00	(0.98, 1.02)
Global health				
Very good	1.0	–	1.0	–
Good	1.4 ^b	(1.3, 1.7)	1.0	(0.8, 1.3)
Fair	2.3 ^b	(1.9, 2.7)	0.7	(0.5, 1.0)
Poor	3.6 ^b	(2.7, 5.0)	2.2	(1.1, 4.7)
Recent complaint				
No	1.0	–	1.0	–
Yes	1.6 ^b	(1.4, 1.8)	1.0	(0.8, 1.2)
Chronic complaint				
No	1.0	–	1.0	–
Yes	1.2 ^b	(1.1, 1.3)	1.0	(0.8, 1.3)
Asthma				
No	1.0	–	1.0	–
Yes	1.0	(0.9, 1.1)	0.6	(0.4, 0.9)
Cardiovascular disease				
No	1.0	–	1.0	–
Yes	0.7 ^b	(0.6, 0.9)	0.4 ^b	(0.2, 0.7)
Diabetes				
No	1.0	–	1.0	–
Yes	0.8	(0.6, 1.1)	0.1	(0.0, 0.7)
Musculoskeletal disease				
No	1.0	–	1.0	–
Yes	1.3 ^b	(1.2, 1.4)	0.8	(0.6, 1.0)
Epilepsy				
No	1.0	–	1.0	–
Yes	0.9	(0.6, 1.2)	0.6	(0.2, 1.6)

Table II (Continued)

	GP vs. GP&CAM		GP vs. CAM	
	Adj OR ^a	95% CI	Adj OR ^a	95% CI
Psychiatric complaint				
No	1.0	–	1.0	–
Yes	1.4 ^b	(1.2, 1.5)	0.9	(0.7, 1.2)
Cancer				
No	1.0	–	1.0	–
Yes	0.9	(0.7, 1.1)	0.6	(0.3, 1.3)
Another chronic disease				
No	1.0	–	1.0	–
Yes	1.0	(0.9, 1.2)	0.7	(0.5, 1.1)
Injury				
No	1.0	–	1.0	–
Yes	1.1	(1.0, 1.3)	0.9	(0.7, 1.2)
Hay fever				
No	1.0	–	1.0	–
Yes	1.3 ^b	(1.2, 1.4)	1.3	(1.1, 1.7)

^aAll variables are adjusted for all variables in the model. ^bStatistically significant, with $p < 0.005$.

good opportunity for identifying CAM-only users, no previous study has focused solely on the characteristics of this group.

Compared with the usual finding that females are the most frequent users of CAM [4,6,8], it appears somewhat surprising to find that being male was associated with being a CAM-only user compared with a GP-only user. Our findings suggest that women who consult a CAM practitioner do so in conjunction with consulting a GP, while men who consult a CAM practitioner do not tend to also consult a GP. This finding warrants further investigation.

Our study findings suggest that serious medical complaints such as cardiovascular diseases reduce the likelihood of using only CAM compared with only using a GP. At the same time, the CAM-only users tend to have a similar or better perception of their health and the same level of health complaints as GP-only users. There are at least two possible interpretations for this finding. First, it may be that those using only CAM do so as a preventive measure or for complaints that do not affect their daily living. Alternatively, this finding may be due to CAM-only users holding a different view of health and disease from that underpinning conventional Western medicine [21,22].

Self-reported global health perception is a significantly stronger predictor than sociodemographic variables, self-reported health complaints, and prevalence of a definite disease in predicting GP&CAM use. This finding adds weight to results from other

studies that have examined CAM use in more selected populations [22–24].

Conclusions

This paper reports findings from the first study to compare the sociodemographic characteristics, perceived health status, and medical complaints of GP-only users, CAM-only users, and those who use both GP and CAM in a total population. There are few CAM-only users and they are more likely than GP-only users to be male, aged 30–69, and without cardiovascular disease. Users of both GP&CAM were less healthy with more complaints and poorer self-reported health than GP- or CAM-only users.

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