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Original Article

Medical Students' Knowledge, Perceptions, and Interest in Complementary and Alternative Medicine

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Abstract

Background: Complementary and alternative medicine (CAM) is a growing industry in the health care system. In Ireland, to date there has not been a study that evaluates the knowledge of, interest in, and attitude of Irish medical students toward CAM.
Objectives: This research can serve as a pilot study to inform Irish medical schools on the need to introduce CAM into the medical curriculum.
Materials and Methods: The survey instrument was a modified design based on previously published studies carried out in other geographical areas. All medical students within the undergraduate and graduate entry programs (GEP) at the Royal College of Surgeons in Ireland were invited to participate in the study. SPSS software was used to analyze the results of the questionnaires.
Results: The survey completion rate was 20.1%. A majority of students (78.4%) thought that CAM knowledge is important for their future career as physicians. Approximately 65% of students reported that they have not acquired sufficient knowledge about CAM from medical school, and 50.2% of students believe CAM should be incorporated into the medical curriculum. Preclinical years (49.4%) were suggested as the most appropriate time to learn about CAM. Knowledge of CAM modalities was generally rated as minimal or none by students. Among the 15 CAM modalities incorporated in the survey, massage, acupuncture, and meditation received the highest interest from students. Students who believe in a religion had a higher interest in CAM ($p < 0.05$). In terms of their personal view, massage, spirituality, and acupuncture received the highest positive responses. Attitudes toward CAM were positive from students. Lower willingness to use CAM was seen in clinical students ($p < 0.05$).
Conclusions: It is important for the faculty of Irish medical schools to consider the possibility of integrating CAM education into the conventional medical curriculum in a systematic manner to better prepare students in their future career.

Introduction

Complementary and alternative medicine (CAM) is a growing industry in the health care system and the use of CAM in health care is rapidly evolving. The National Center for Complementary and Alternative Medicine (NCCAM) defines CAM as a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine.[1] There are many types of CAM practices, and they may be grouped into categories such as natural products, mind–body, and body-based practices. The categories are not formally defined, and one practice may fit into various categories.

CAM Use in Ireland

Past research has shown increased interest of patients in CAM for the management of diseases such as cancer, skin disease, and chronic pain.[2–4] Additionally, a recent study that analyzed CAM use among the general population of Ireland reported an increased prevalence rate from 20% in 1998 to 27% in 2002. The most commonly used CAM practices were mind–body and body-based practices such as acupuncture and reflexology. In general, people with higher income, self-employed status, and with private insurance were more likely to avail themselves of CAM. In terms of health status, persons with co-existing medical problems or

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who were dissatisfied with conventional medicine were likely to visit CAM practitioners.[5]

CAM Studies in Medical Students

In the United States, medical schools are gradually becoming aware of the need to provide CAM-related education. In fact, some universities have incorporated CAM training into their medical curricula.[6–8] However, this is not widespread in other countries although in recent years, it has been reported that medical students across the globe, including the United Kingdom, Singapore, and Germany, have an interest in increasing their knowledge of CAM in addition to conventional medicine.[9–11]

Study Objectives

In Ireland, to date there has not been a study that evaluates the knowledge, interest, and attitude of Irish medical students in CAM. This research can serve as a pilot study to inform Irish medical schools on the needs to introduce CAM into the medical curriculum. It was designed to assess the knowledge, interest, and attitudes of medical students, who are enrolled in an Irish institution, regarding complementary and alternative medicine.

Methods

Questionnaire

The survey instrument was a modified design based on previously published studies carried out in other geographical areas.[6,9,10,12] The first part of the survey instrument incorporated a question on the religion of the participants. Survey data were merged with existing student profile data to provide a demographic profile including gender, course and year of medical school, age, and nationality. Unique personal identifiers were only known to one member of the research team. The second part of the survey instrument consisted of 11 items assessing the knowledge of, interest in, and attitudes toward CAM. Students were asked to rate their level of interest, knowledge, personal view, and willingness to use CAM in the future for 15 CAM modalities. These modalities were as follows: meditation, massage, spirituality, herbalism, chiropractic, acupuncture, traditional oriental medicine, *t'ai chi*, homeopathy, biofeedback, hypnosis, Ayurveda, osteopathy, aromatherapy, and naturopathy. Knowledge of CAM was also assessed objectively from their responses to nine statements (true, false, or not sure). Their attitudes were further assessed from their selected responses to 10 statements (strongly disagree, disagree, neutral, agree or strongly agree). In the study, herbalism was defined as consultation of an herbalist as opposed to use of over-the-counter herbal medicines. Traditional oriental medicine was defined as a complete system of healing encompassing herbal medicine, acupuncture, and massage. The survey instrument was administered using an online survey tool (Survey Monkey).

Pilot study

In early May 2011, 15 undergraduate medical students were invited to participate in a pilot study. Feedback from the pilot was used to revise and refine the survey instrument before wider distribution. These 15 students were excluded from the main study.

Participants

All medical students in the undergraduate and graduate entry programs at the Royal College of Surgeons in Ireland were invited to participate in the study. In mid May 2011, personalized e-mail invitations were sent to students via their College e-mail accounts. A second reminder to nonrespondents only was sent 1 week later.

Statistical analysis

SPSS software was used to analyze the results of the questionnaires and the association between the demographic data and knowledge of, attitudes toward, and interest in CAM. Significant results were reported at a p-value of < 0.05. All confidence intervals were reported at 95%.

Ethical approval

The study was approved by the Research Ethics Committee at the Royal College of Surgeons in Ireland (April 18, 2011).

Results

Demographic profile

A total of 1585 students were invited to participate in this survey, and the completion rate was 20.1% (319/1585). Among the respondents, 51.4% (164/319) and 48.6% (155/319) were female and male, respectively. Table 1 shows the breakdown of completion rate by year of course and gender. The geographical areas of origin of the participants included Europe (34.2%; 109/319), Far East (21.3%; 68/319), Middle East (23.8%, 76/319), North America (16.6%; 53/319), and the rest of the world (4.1%; 13/319). Religion was grouped into major categories as shown in Table 2. There was a significant association between sex of participant and religion, with proportionately more men in the "no religion" category and more women in the "Christian" category ($p < 0.001$).

Knowledge of CAM

Students were asked to rate their own level of knowledge in various CAM modalities. For all the CAM modalities

Table 1. Survey Completion Rate by Medical Class and Gender

Class	Number of students		Completion rate (%)
	Women	Men	
GEP MED 1	5	9	4.4
GEP MED 2	8	7	4.7
UG PRE-MED	16	22	11.9
UG MED 1	45	31	23.8
UG MED 2	26	23	15.4
UG MED 3	16	23	12.2
UG MED 4	20	19	12.2
UG MED 5	28	21	15.4
Total	164	155	20.1

UG MED, Undergraduate Medicine; UG PRE-MED, Undergraduate Pre-Medicine; GEP, Graduate Entry Program.

Table 2. Survey Completion Rate by Religion and Gender

Religion: major categories	Sex		
	Women	Men	Total
None	22	46	68
	13.4%	29.7%	21.3%
Islam	62	66	128
	37.8%	42.6%	40.1%
Christian	63	31	94
	38.4%	20.0%	29.5%
Other	17	12	29
	10.4%	7.7%	9.1%
Total	164	155	319

listed, most students rated their knowledge as minimal or none (Table 3). The CAM modalities that students claimed to have at least good knowledge of were massage (33.2%, 106/319) and spirituality (32.3%, 103/319), respectively. More than half of the students rated having no knowledge of biofeedback, Ayurveda, naturopathy, osteopathy and *t'ai chi*.

In the survey, following the general questions on CAM, specific questions were asked on certain CAM modalities (herbalism, naturopathy, acupuncture, homeopathy, and chiropractic) to objectively assess students' CAM knowledge (Table 4). Most students recognized the uses of acupuncture (84.6%) and chiropractic (65.8%) in pain management. Knowledge of herbalism was limited, and more than half of the students did not know the uses and side-effects of St. John's Wort, Echinacea, and *Ginkgo biloba*; for example, 21.8% of participants gave a positive response to the statement "long-term use of Echinacea is recommended," which is incorrect. Moreover, when asked whether or not "Naturopathy emphasizes the role of the musculoskeletal system in health and disease," 78.1% of students did not know about naturopathy, and 6.5% gave a wrong response. Among the 59.2% who stated that they know about the principle of homeopathy, 12.6% of the responses were incorrect.

Interest in CAM

The majority of students (78.4%; 250/319) thought that knowledge of CAM is important in their future career as a physician. However, 64.9% of students did not think that they have acquired sufficient knowledge about CAM from medical school. Furthermore, 50.2% (160/319) agreed that CAM should be incorporated into the medical curriculum. Among them, 49.4% rated preclinical years as the most appropriate time during medical school to learn about CAM, followed by clinical years (26.7%) and subinternship (11.3%). In terms of methods to learn about CAM, students preferred lectures (46%) and direct shadowing (37.3%). Some students opted for combinations of theoretical knowledge and clinical exposure.

For the 15 CAM modalities listed in Table 5, most students have shown at least some interest. Table 5 shows the self-perceived interest of students in the various CAM modalities. The CAM modalities that attracted at least some interest were massage (67.4%), acupuncture (56.7%), meditation (53.3%), herbalism (47.1%), hypnosis (46.1%), spirituality (45.5%), and traditional oriental medicine (41.4%).

The correlation between the items reflecting interest in different CAM modalities was investigated to see whether they represented a single underlying dimension, using Mokken scaling. Mokken scaling is based on the consistency with which participants respond to items, measuring this using Guttman errors (inconsistent responses between items). The 15 items had a high degree of consistency, with a Loevinger H coefficient of 0.52. The H coefficient is the amount of item consistency, and ranges from 0 to 1. The analysis showed strong evidence for a single underlying trait of interest in CAM, without giving any evidence that this trait was made up of several subtraits. Accordingly, participants were scored on the basis of their average score on the 15 items. Multiple regression analysis showed that the interest score was not independently related to sex of participant ($p > 0.05$) or to whether the participant was in the GEP or not ($p > 0.05$). It also did not vary by year of course ($p > 0.05$). Interest did, however, vary by religion (Fig. 1).

Table 3. Self-Perceived Level of Knowledge of Students in Various CAM Modalities

CAM modalities	Excellent knowledge		Good knowledge		Minimal knowledge		No knowledge	
	Frequency (n = 319)	Percentage (%)	Frequency (n = 319)	Percentage (%)	Frequency (n = 319)	Percentage (%)	Frequency (n = 319)	Percentage (%)
Meditation	10	3.1	61	19.1	172	53.9	76	23.8
Massage	18	5.6	88	27.6	172	53.9	41	12.9
Spirituality	30	9.4	73	22.9	128	40.1	88	27.6
Herbalism	10	3.1	49	15.4	139	43.6	121	37.9
Chiropractic	8	2.5	37	11.6	127	39.8	147	46.1
Acupuncture	14	4.4	50	15.7	164	51.4	91	28.5
T'ai chi	3	0.9	29	9.1	121	37.9	166	52.0
Homeopathy	14	4.4	43	13.5	113	35.4	149	46.7
Biofeedback	6	1.9	12	3.8	69	21.6	232	72.7
Hypnosis	6	1.9	31	9.7	156	48.9	126	39.5
Ayurveda	2	0.6	19	6.0	76	23.8	222	69.6
Osteopathy	7	2.2	17	5.3	99	31.0	196	61.4
Aromatherapy	7	2.2	26	8.2	159	49.8	127	39.8
Naturopathy	3	0.9	15	4.7	82	25.7	219	68.7

CAM, complementary and alternative medicine.

Table 4. Objective Assessment of the CAM Knowledge of Students

Statement	Correct response		Not sure	
	Frequency (n = 319)	Percentage (%)	Frequency (n = 319)	Percentage (%)
St. John's Wort is commonly used for the treatment of mild-to-moderate depression.	125	39.2	170	53.3
Echinacea is commonly used for cold and flu symptoms.	144	45.1	168	52.7
Long-term use of Echinacea is recommended.	89	27.9	205	64.3
Garlic can lower blood lipid levels to a mild extent.	182	57.1	122	38.2
Naturopathy emphasizes the role of the musculoskeletal system in health and disease.	49	15.4	249	78.1
Ginkgo biloba is commonly used in people with Alzheimer disease.	65	20.4	231	72.4
Homeopathy is a form of alternative medicine in which practitioners use highly diluted preparations.	165	51.7	130	40.8
Acupuncture can be used to relieve pain.	270	84.6	40	12.5
Chiropractic specializes in spinal manipulation and is used to treat lower back pain.	210	65.8	91	28.5

CAM, complementary and alternative medicine.

Students with no religion had significantly lower interest scores than students with any religion ($p < 0.05$). Within those who had a religion, there was no significant difference in interest levels between the three main groupings, Islam, Christianity and Others ($p > 0.05$, Wald *post-hoc* test for equality of coefficients).

Attitudes to CAM

To assess CAM attitudes, students were asked to choose their personal views on the 15 CAM modalities, as shown in Table 6. Personal views toward massage were most positive (82.8%), followed by meditation (69.0%), spirituality (56.7%), acupuncture (59.6%), and herbalism (48.9%). More than half of the students had no opinion of 7 of the 15 CAM modalities. Homeopathy received the highest negative views of 33.9% followed by chiropractic (23.2%).

To further explore the students' attitudes, 10 statements were posed and students were asked to choose one of the five responses (Table 7). A high proportion of students (71.4%) at least agreed that CAM includes ideas and methods from which conventional medicine can benefit. Similarly, 69% thought that clinical care should integrate the best of conventional and CAM practices. Surprisingly, only 45.3% thought that a patient who suggests the use of CAM in conjunction with conventional medicine should be encouraged, and 42.3% concurred with the importance of having CAM practices available to patients or within their referral network. With regard to health insurance, 52.4% had no opinion and 29.7% disagreed that it should cover CAM treatment. Almost all students (97.1%) agreed that patients should inform or consult their doctors about their use of CAM, and 89.6% agreed that the use of CAM should be enquired about during a regular history taking; however,

Table 5. Self-Perceived Interest of Students in Various CAM Modalities

CAM modalities	A lot of interest		Some interest		Minimal interest		No interest	
	Frequency (n = 319)	Percentage (%)	Frequency (n = 319)	Percentage (%)	Frequency (n = 319)	Percentage (%)	Frequency (n = 319)	Percentage (%)
Meditation	45	14.1	125	39.2	87	27.3	62	19.4
Massage	75	23.5	140	43.9	64	20.1	40	12.5
Spirituality	51	16.0	94	29.5	84	26.3	90	28.2
Herbalism	57	17.9	93	29.2	88	27.6	81	25.4
Chiropractic	29	9.1	89	27.9	98	30.7	103	32.3
Acupuncture	60	18.8	121	37.9	80	25.1	58	18.2
TOM	42	13.2	90	28.2	101	31.7	86	27.0
T'ai chi	28	8.8	91	28.5	105	32.9	95	29.8
Homeopathy	20	6.3	60	18.8	97	30.4	142	44.5
Biofeedback	16	5.0	66	20.7	97	30.4	140	43.9
Hypnosis	53	16.6	94	29.5	82	25.7	90	28.5
Ayurveda	22	6.9	65	20.4	98	30.7	134	42.0
Osteopathy	19	6.0	80	25.1	100	31.3	120	37.6
Aromatherapy	32	10.0	79	24.8	100	31.3	108	33.9
Naturopathy	23	7.2	60	18.8	105	32.9	131	41.1

CAM, complementary and alternative medicine; TOM, traditional oriental medicine.

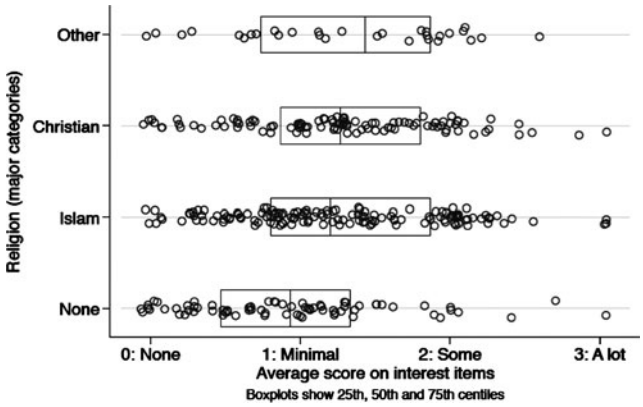

FIG. 1. Interest of study participants in complementary and alternative medicine categorized by their religion.

8.1% disagreed and 21% had no opinion about health care professionals being able to advise their patients about commonly used CAM methods. In terms of the influence of spiritual or religious beliefs toward CAM, 32.9% of students agreed and 40.8% disagreed with this. There was no association found between students' religions and attitudes toward CAM.

Willingness to use CAM

To investigate the willingness to use CAM in future, students were asked to choose one of four responses regarding each of the 15 CAM modalities, as shown in Table 8. Generally, the responses for "not willing to use" were higher than for "definitely use" except for massage and meditation. Of the received responses, 38.6% responded that they would definitely be willing to use massage and 45.8% would maybe use it. A score was created for willingness to use CAM by adding up the number of CAM modalities that the participants said they would be willing to use. This followed a highly skewed distribution, with 45% of participants unwilling to use any of the 15 modalities, 16% nominating only 1, and 10% each nominating 2 and 3, with only 5% nominating 6 or more.

Poisson regression with robust variance estimation was used to examine factors that predicted the number of modalities. There was no association between the number of CAM modalities the participant was willing to use and participant sex, religion, program type (graduate or 5-year). However, there was a significant variation by year of course ($p<0.05$). Compared with foundation year, lower willingness to use CAM was found in year 3 ($p<0.001$) and year 5 ($p<0.05$). This difference was independent of participant sex, religion, or programme status.

Participants were further classified into those who would use one or more CAM modalities and those who would use none. None of the demographic variables was associated with this variable. Also examined were interaction effects between sex and religion, to see whether willingness to use varied by sex within religious groups, but none of the interaction effects was significant.

Discussion

To the authors' knowledge, this is the first study investigating knowledge of, interest in, and attitudes toward CAM among medical students in Ireland. This study shows that students have limited knowledge of CAM, assessed objectively and subjectively. This is consistent with previous studies.[9,13] The students in the current study rated massage, spirituality, meditation, and acupuncture as the CAM modalities they were most knowledgeable of; similar studies carried out in Australia and America have shown analogous results. British medical students have been shown to be most knowledgeable about acupuncture, yoga, and homeopathy. Despite a similar medical education, Irish and British students have a different knowledge of CAM modalities.[9] Good knowledge in spirituality may have contributed to the fact that 78.7% of Irish students have a religion. Surprisingly, most students only rated themselves to have minimal or no

Table 6. Students' Personal Views on CAM

	Strongly positive		*Positive*		*No opinion*		*Negative*		*Strongly negative*	
CAM modalities	*Frequency* (n=*319*)	*Percentage* (%)	*Frequency* (n=*319*)	*Percentage* (%)	*Frequency* (n=*319*)	*Percentage* (%)	*Frequency* (n=*319*)	*Percentage* (%)	*Frequency* (n=*319*)	*Percentage* (%)
Meditation	53	16.6	167	52.4	79	24.8	15	4.7	5	1.6
Massage	96	30.1	168	52.7	48	15.0	4	1.3	3	0.9
Spirituality	63	19.7	118	37.0	102	32.0	23	7.2	13	4.1
Herbalism	37	11.6	119	37.3	112	35.1	38	11.9	13	4.1
Chiropractic	19	6.0	102	32.0	124	38.9	52	16.3	22	6.9
Acupuncture	42	13.2	148	46.4	96	30.1	25	7.8	8	2.5
TOM	24	7.5	89	27.9	162	50.8	23	7.2	21	6.6
T'ai chi	20	6.3	103	32.3	167	52.4	16	5.0	13	4.1
Homeopathy	14	4.4	53	16.6	144	45.1	48	15.0	60	18.8
Biofeedback	10	3.1	47	14.7	218	68.3	26	8.2	18	5.6
Hypnosis	18	5.6	84	26.3	155	48.6	40	12.5	22	6.9
Ayurveda	12	3.8	48	15.0	217	68.0	26	8.2	16	5.0
Osteopathy	11	3.4	55	17.2	213	66.8	22	6.9	18	5.6
Aromatherapy	19	6.0	76	23.8	163	51.1	42	13.2	19	6.0
Naturopathy	15	4.7	55	17.2	196	61.4	29	9.1	24	7.5

CAM, complementary and alternative medicine.

Table 7. Students' Attitude to CAM

Statement	*Strongly Agree (%)*	*Agree (%)*	*Neutral (%)*	*Disagree (%)*	*Strongly disagree (%)*
CAM includes ideas and methods from which conventional medicine can benefit.	19.7	51.7	19.7	5.0	3.8
CAM therapies not tested in a scientific manner should be discouraged.	17.6	28.2	40.1	12.5	1.6
Clinical care should integrate the best of conventional and CAM practices.	22.9	46.1	20.7	6.3	4.1
Health care professionals should be able to advise their patients about commonly used CAM methods.	22.6	48.3	21.0	4.7	3.4
My spiritual/religious beliefs influence my attitudes toward CAM.	11.6	21.3	26.3	22.3	18.5
Patients should inform/consult their doctors about their use of CAM.	56.7	40.4	11.0	0.9	0.9
It is important to have CAM practices available to patients in my practice or referral network.	9.4	33.9	37.3	13.8	5.6
A patient who suggests the use of CAM in conjunction with conventional medicine should be encouraged.	10.0	35.4	43.6	9.1	1.9
The use of CAM should be asked about during a regular history taking.	32.3	47.3	18.5	1.6	0.3
Health insurance should cover CAM treatment.	5.3	12.5	52.4	17.2	12.5

CAM, complementary and alternative medicine.

knowledge of acupuncture and chiropractic, although they were aware of their principal uses. A plausible explanation to this is that acupuncture and chiropractic are among the most popular reasons for the public to visit a CAM practitioner.[5]

It is not surprising that a majority of students have shown interest in CAM, given their poor knowledge in it. However, students have shown more interest in massage, meditation, and acupuncture, modalities that they were perceived to be more knowledgeable about. This suggests that their interests are influenced by other factors but not their knowledge, possibly because of a high prevalence of use of these modalities by the general population.[14] Students also showed more positive attitudes toward these modalities. It was found that whether or not students had a religion affects their interest in learning CAM, although there was no correlation seen among the individual religions. On the other hand, there was no association between gender and interest.[15]

Most students agreed that knowledge of CAM is important, although only half agreed that it should be incorporated into the medical curriculum, which is not as welcoming as in other countries.[9] This could be associated with the already existing high workload in medical school. To tackle this, a concise set of high-quality CAM content based on a properly organized framework addressed by NCCAM can be used.[16] Both lectures and direct shadowing appear to be the favorable methods for students. In one of the U.S. institutions, a 3-week elective CAM rotation that integrated rotation and lectures has improved students' positive attitudes and their knowledge.[17] Alternatively, evidence-based principles have been utilized to effectively teach medical students about CAM.[18]

The results showed that students' attitudes are in line with their interests and limited knowledge. Despite a high agreement from students that conventional medicine can benefit from some forms of CAM and integration of the best is reasonable, only a lower proportion of them would encourage having CAM practices available within their network. Other than massage and meditation, willingness to use

Table 8. Willingness to Use of Various CAM Modalities in the Future

	Definitely use		*Maybe use*		*Don't know*		*Not willing to use*	
CAM modalities	*Frequency (n = 319)*	*Percentage (%)*	*Frequency (n = 319)*	*Percentage (%)*	*Frequency (n = 319)*	*Percentage (%)*	*Frequency (n = 319)*	*Percentage (%)*
Meditation	69	21.6	156	48.9	34	10.7	60	18.8
Massage	123	38.6	146	45.8	23	7.2	27	8.5
Spirituality	65	20.4	98	30.7	54	16.9	102	32.0
Herbalism	41	12.9	146	45.8	47	14.7	85	26.6
Chiropractic	46	14.4	124	38.9	54	16.9	95	29.8
Acupuncture	60	18.8	141	44.2	44	13.8	74	23.2
TOM	25	7.8	118	37.0	73	22.9	103	32.3
T'ai chi	23	7.2	123	38.6	74	23.2	99	31.0
Homeopathy	14	4.4	80	25.1	72	22.6	153	48.0
Biofeedback	13	4.1	79	24.8	116	36.4	111	34.8
Hypnosis	22	6.9	121	37.9	68	21.3	110	34.5
Ayurveda	13	4.1	90	28.2	106	33.2	110	34.5
Osteopathy	18	5.6	86	27.0	113	35.4	102	32.0
Aromatherapy	26	8.2	96	30.1	79	24.8	118	37.0
Naturopathy	19	6.0	87	27.3	102	32.0	111	34.8

CAM, complementary and alternative medicine; TOM, traditional oriental medicine.

CAM was generally low. Lower willingness to use CAM was found more in clinical students, which was also demonstrated in other studies.[2] This may suggest that they are not well equipped with knowledge of the efficacy and safety of CAM, and hence are afraid to advise and encourage their patients who suggest the use of CAM. Nevertheless, most students agree that patients should inform doctors about CAM use and that it should be inquired about during history taking.

The survey has a few limitations, one of which was the completion rate. Although comparable to a study carried out in the Netherlands,[19] the completion rate can be considered as low. The following are possible explanations as to why the response rate was only 20.1%. Our school commonly offers course evaluation surveys to the students, which usually receive between 60% to 70% completion rate, the end of semester survey coincided with the time we carried out our survey. In addition, the survey started during examination time (May 25) and continued to the summer vacation (July 12); hence, students are usually distracted during that time. Furthermore, 70% of the medical students in our institution are based outside of Ireland, and most go back home during the summer and disengage from the institution. Another limitation was due to the diverse student body, which is not necessarily representative of medical students in other Irish institutions. Finally, the results may not be representative of the GEP student cohort due to a low completion rate.

Taking into account the expectations and opinions from this study's medical students, it is important for the faculty of Irish medical schools to consider the possibility of performing a larger survey that would include the other Irish medical schools. The results from this could lead to the integration of CAM modules into the conventional medical curriculum.

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