

Knowledge and attitudes toward complementary and alternative medicine amongst Turkish nursing students

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ABSTRACT

Objectives: To evaluate the knowledge and attitudes of the Nursing School Students on Complementary and Alternative Medicine (CAM).

Methodology: This cross-sectional study was conducted among students of Gulhane Military Medical Academy Nursing School during March/April 2010. The sociodemographic characteristics of participants and their knowledge and attitudes towards CAM were collected by using a structured questionnaire developed by researchers.

Results: Out of a total of 354 students, only 91.2% of those students (n=323) participated in the study. The sources of information were stated as television and radio 80.3% (n=265), internet 69.0% (n=223), newspapers and magazines 68.1% (n=220), friends 48.6% (n=157), and books 32.5% (n=105) by participants. While the mostly known first three CAM practices were hypnosis (59.4%), prayer (58.5%), and herbal therapies (52.6%), those which were stated as most effective were massage (81.4%), herbal therapies (69.3%), and prayer (56.0%). Almost five out of six students (82.7%, n=267) stated that CAM therapies should be included into their curriculum. The distribution of the responses for the item, "Complementary therapies are a threat to public health" had statistically significant difference between the classes (p<0.001). The first year, second year and third year class students had more positive attitude for CAM than the fourth year class students.

Conclusions: It is suggested that the lectures on CAM practices should be included into the curriculum of the nursing students who are enthusiastic about learning them which will have a positive impact on their education and training.

KEY WORDS: Complementary and alternative medicine, Nursing school students.

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INTRODUCTION

Use of complementary and alternative medicine (CAM) has increased worldwide, especially, in the last few decades.¹⁻⁴ Many studies have reported the benefits of complementary and alternative therapies.⁵⁻⁷ The negative effects of herbal therapies and acupuncture have also been reported in the literature.⁶⁻¹²

Nurses have a critical role in the health care team, especially, for patients with chronic diseases. The important role of nurses in the assessment and education of CAM use for chronic diseases is documented

in literature.¹³⁻¹⁶ Parallel to the increase of CAM use, a growing interest in the introduction and integration of CAM instruction into curriculums has also been witnessed all over the world.¹⁷⁻¹⁹

The aim of this study was to determine the knowledge and attitudes of the Gulhane Military Nursing School Students on CAM.

METHODOLOGY

This cross sectional study was performed among Gulhane Military Medical Academy Nursing School students in Ankara during March/April 2010. The questionnaire was performed by authors after review of literature. The questionnaire contained demographic questions, and multiple-choice questions related to, and frequently used CAM therapies.

Three questions were asked to assess the participants' attitudes toward CAM. The present study was approved by our Institutional Ethics Committee and then conducted among students who agreed to give informed consent. We did not discuss anything related to CAM with the participants before or after they completed the questionnaire.

The data were analyzed by using SPSS (version 11.0, Chi., Il., USA). Descriptive statistics were presented as frequency and percents. Chi-square test was used to determine the association between participants' demographic characteristics and their attitudes and knowledge towards CAM. A p value of <0.05 was accepted as statistically significant.

RESULTS

Three hundred twenty three of 354 students responded the questionnaire (response rate was

91.2%). The school was a boarding school so all of the students had to stay in the school during their educational period. All of the students were female. The biggest group was the first year class which were nursing students while the fourth year class students was the smallest one. Almost 60% of participants' family were living in cities and their mothers graduated from elementary school. On the other hand, the biggest group was of high school graduates of fathers' with an educational degree (Table-I).

Almost half of the students had some knowledge about hypnosis, spirituality, herbal medicine, massage, and acupuncture. On the other hand, more than two thirds of participants had never heard about chiropractic, homeopathy, ayurvedic medicine, osteopathy, and reiki. More than half of the students had stated positive attitudes towards massage, herbal medicine, spirituality and nutritional support (Table-II).

Students obtained information on CAM mainly through television and radio (80.3%, n=265), internet (69.0%, n=223), newspapers/journals (48.6%, n=157), friends (48.6%, n=157), and books (32.5%, n=105).

We determined the attitude towards CAM by using three statements and we found statistically significant differences between nursing classes. The first three classes gave more negative responses toward the statement of *"Complementary therapies are a threat to public health"*. First class students stated more positive response to the statement, *"Complementary and alternative therapies are effective and safe"* than the other three class students. Lastly the third and fourth class students stated more positive responses to the statement, *"Effects of complementary therapies are usually the result of a placebo effect"* than the first two class students (Table-III).

Table-I: Some sociodemographic characteristic of students (Ankara, 2010).

		n	%
Nursing class	1	108	33.4
	2	82	25.4
	3	81	25.1
	4	52	16.1
Family residence	Village	44	13.6
	Town	91	28.2
	City	188	58.2
Mother's educational status	Elementary school	196	60.7
	Secondary school	36	11.1
	High school	75	23.2
	College	16	5.0
Father's educational status	Elementary school	107	33.1
	Secondary school	43	13.3
	High school	109	33.7
	College	64	19.8

Table-II: The knowledge and attitudes of students for CAM modalities (Ankara, 2010).

	<i>Never heard (n, %)</i>	<i>Only knows the name (n, %)</i>	<i>Have some knowledge (n, %)</i>	<i>Safe and effective (n, %)</i>	<i>Dangerous for health (n, %)</i>
Biofeedback	190 (58.8)	103 (31.9)	30 (9.3)	23 (7.1)	1 (0.3)
Hypnosis	52 (16.1)	79 (24.5)	192 (59.4)	109 (33.7)	21 (6.5)
Meditation	64 (19.8)	114 (35.3)	145 (44.9)	118 (36.5)	7 (2.2)
Tai Chi	190 (58.8)	113 (35.0)	20 (6.2)	9 (2.8)	4 (1.2)
Acupuncture	71 (22.0)	96 (29.7)	156 (48.3)	109 (33.7)	11 (3.4)
Ayurvedic medicine	272 (84.2)	39 (12.1)	12 (3.7)	6 (1.9)	2 (0.6)
Chiropractic	299 (92.6)	21 (6.5)	3 (0.9)	2 (0.6)	1 (0.3)
Massage	141 (43.7)	22 (6.8)	160 (49.5)	263 (81.4)	2 (0.6)
Osteopathy	258 (79.9)	50 (15.5)	15 (4.6)	7 (2.2)	2 (0.6)
Reiki	231 (71.5)	60 (18.6)	32 (9.9)	30 (9.3)	1 (0.3)
Spirituality	114 (35.3)	20 (6.2)	189 (58.5)	181 (56.0)	6 (1.9)
Herbal medicine	126 (39.0)	27 (8.4)	170 (52.6)	224 (69.3)	4 (1.2)
Homeopathy	288 (89.1)	29 (9.0)	6 (1.9)	6 (1.9)	0 (0.0)
Nutritional support	130 (40.2)	55 (17.0)	138 (42.7)	166 (51.4)	3 (0.9)

Almost five out of six students (82.7%, n=267) stated that CAM therapies should be integrated into the curriculum. There is no statistically significant difference between classes, although the fourth class students declared the lowest positive attitude about the integration into the curriculum (75%, p=0.172).

There was no statistically significant difference between groups with respect to family residence, mother's and father's education (p>0.05). However, we did find statistically significant difference between classes for the knowledge of complementary and alternative therapies. Fourth year class students had more knowledge about taichi, ayurvedic medicine, homeopathy and less knowledge on massage and spirituality than the other classes.

DISCUSSION

This study was conducted to determine the knowledge and attitude of Nursing School students about complementary and alternative therapies. In our study, unfortunately, the response rates differed for every class. While the response rate was 99.1% for first year nursing class, it was approximately 69.3% for fourth year class students. The response rates were more than 95% for second and third year class students. It was more difficult to access fourth year class students in the school since they were spending most of time in training in the hospital for clinical practices.

Almost half of the students had some knowledge about hypnosis (59.4%), spirituality-praying (58.5%),

Table-III: Nursing students' attitudes towards complementary therapies (Ankara, 2010).

	Nursing class				
	1st %	2nd %	3rd %	4th %	p *
<i>Complementary therapies are a threat to public health.</i>					
Strongly agree and agree	0.9	4.9	3.7	25.0	<0.001
Neutral	42.6	42.7	37.0	38.5	
Strongly disagree and disagree	56.5	52.4	59.3	36.5	
<i>Complementary and alternative therapies are effective and safe.</i>					
Strongly agree and agree	40.7	28.0	27.2	17.3	0.034
Neutral	54.6	67.1	65.4	69.2	
Strongly disagree and disagree	4.6	4.9	7.4	13.5	
<i>Effects of complementary therapies are usually the result of a placebo effect.</i>					
Strongly agree and agree	6.5	6.1	28.4	19.2	<0.001
Neutral	83.3	85.4	60.5	70.1	
Strongly disagree and disagree	10.2	8.5	11.1	7.7	

herbal medicine (52.6%), massage (49.5), and acupuncture (48.3%). The lowest self-perceived knowledge proportions were found for chiropractic, homeopathy, ayurvedic medicine, and osteopathy. On the other hand, the most safe and effective therapies were stated as massage (81.4%), herbal therapies (69.3%), and praying (56.0%) by the students. The lowest self-perceived effective therapies were found again the same as chiropractic, homeopathy, ayurvedic medicine, and osteopathy. Uzun and et al had found massage, praying, and vitamins as the most well-known therapies while biofeedback, homeopathy, and meditation were the least known ones in a study conducted among Turkish nursing school students in 2004.²⁰ In our previous study which was conducted among Turkish medical students, we found acupuncture, hypnosis and mediation as the most well known and chiropractic, osteopathy and homeopathy as the least self-perceived known therapies.²¹ In literature, findings varied among different health profession of students in different countries. Yeo et al reported acupuncture as the most and chiropractic, osteopathy, ayurvedic medicine and homeopathy as the least known therapies amongst medical students in Singapore.²² While massage, herbal medicine and meditation were the most knowledgeable among American medical students,²³ vitamins, herbals and massage were the best known self-reported modality among Czech pharmacy students.²⁴

In our study, we found a very high proportion among students who were not sure about the safety and effectiveness of CAM modalities. The proportion of neutral participants was 40.6% and 62.9% for the statements, "Complementary therapies are a threat to public health", and "Complementary and alternative therapies are effective and safe" respectively. Although the negative attitudes were less than 10% for both statements, the hesitant ones were considerably more. The proportions of neutrals were less among Turkish medical students.²¹ On the other hand, quite high positive attitudes were reported among Australian pharmacy (> 80%), Singaporean medical students (92%), and American medical students (> 80%) in the literature.^{19,22,25} Our findings shows the insufficient knowledge among students, which was stated in previous studies.^{14,20,23}

Television, radio, and internet were the most common sources for information on CAM (80.3%, 69% respectively). Internet was the main source (92.6) among Turkish medical students in our previous study.²¹ The sources among Czech pharmacy students were found as internet, journals and books.²⁴

We used three statements to determine the attitude towards CAM and found statistically significant differences between nursing classes. In general, the first year class students had more positive and the fourth year class students had more negative attitudes in the group. We found the attitudes toward CAM more positive in the first three medical class students.²¹ Our result was consistent with the studies which were conducted among Czech pharmacy students and British medical students.^{24,26}

Although the nursing students were not sufficiently knowledgeable about CAM, almost five out of six students (82.7%, n=267) stated that CAM therapies should be integrated into the curriculum. Yildirim et al reported 61.3%, Uzun and Tan reported 64.5% of nursing school students wanted CAM to be integrated into the nursing curriculum in the other Turkish study groups.^{14,20} Our students seem more enthusiastic than the other Turkish nursing students. Chaterji and et al found more than 75% of medical students in their study group felt that CAM should be included in the curriculum.²⁵

We found that nursing students in our institution also had limited knowledge about CAM therapies. As the use of CAM therapies is increasing day by day, in order to be aware of the possible negative effects of CAM modalities, health care providers should make more efforts to update their knowledge and access to reliable resources regarding the safety and efficacy of CAM therapies. We also believe that in order to make nursing students more aware and helpful to their patients in their health care practices, it is important to integrate these methods into the curriculum.

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Authors Contribution:

TT designed and did statistical analysis & manuscript writing.

SK, NK did data collection and editing of manuscript. CA, YZT, TK did review and final approval of manuscript.