ORIGINAL ARTICLES

Factors Associated with Changes in Knowledge and Attitude towards Public Health Concepts among Chiropractic College Students Enrolled in a Community Health Class

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Purpose: This survey was conducted to identify factors that may be associated with changes in knowledge and attitudes towards basic health promotion and public health concepts among chiropractic students enrolled in a course in community health. **Methods:** Anonymous surveys were conducted of students before and after a second-year chiropractic college course in community health. Results were analyzed using percentages and Chi Square statistics as appropriate. **Results:** Students' knowledge of health promotion and public health concepts improved significantly by the end of the course. Students' attitudes towards these also improved, although to a lesser degree. Students indicated that they had a favorable impression of the importance of utilizing health promotion in practice and working with other public health professionals. However, vaccinations were still looked upon unfavorably by half of the students by the end of the course. Pre-class, a positive attitude towards public health concepts was associated with being female, older, Latino, having children, having a poorer perceived health status, conservative politically and religious. These differences tended to lessen by the end of the course. **Conclusions:** A course in community health was successful in adding to students' knowledge and positive attitudes towards health promotion and public health. However, additional educational strategies are needed to ensure changes in future practice behavior, particularly in the area of vaccinations. (J Chiropr Educ 2008;22(2):127–137)

Key Indexing Terms: Public Health; Health Education; Chiropractic; Students

INTRODUCTION

Modern day health practitioners are increasingly expected to practice health promotion and disease prevention as a fix for a health care system that traditionally has been overly focused on curing acute diseases.[1] Courses in community health are a standard part of the curriculum of health care professional colleges in an attempt to influence the knowledge, attitudes and behaviors of students so that they will follow this model of health care after graduation.[2]

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Traditional chiropractic philosophy has often conflicted with basic tenets of public health, such as the value of vaccinations.[3–6] Despite hostility from a segment of chiropractic practitioners, chiropractic educators and organizational leaders have tended to look more favorably upon standard public health concepts. In 1995, the Chiropractic Health Care Section of the American Public Health Association (APHA) was created, and it soon drafted a model course on public health for chiropractic colleges.[7,8] In 2007 the Council on Chiropractic Education added wellness care to its list of competencies required for students to master before graduating from a chiropractic program.[9] Although chiropractic colleges are now required to teach the basic concepts of public health, the question remains as to what extent their students are being reached.

A literature review revealed that little research has been conducted on changes in knowledge and attitudes of students who are enrolled in a community health course. This survey was conducted to measure knowledge and attitudes of chiropractic students towards basic health promotion and public health concepts, measure any changes in these after a course in Community Health, and examine factors that may be associated with these changes.

METHODS

Community Health is a mandatory second year course for chiropractic students enrolled at the Southern California University of Health Sciences (SCU). The course consists of a survey of basic public health topics, including behavioral theories of change, the Healthy People 2010 program, infection control and vaccinations. The course has a lead instructor who is a MD (SA), and several chiropractic and other professional guest lecturers.

Anonymous written surveys were administered to two consecutive classes of students about their knowledge and attitudes towards basic community health concepts. The surveys also queried students about demographic factors and personal backgrounds. Identical surveys were administered at the very first and last lectures of each course. The two courses were taught using nearly identical schedules of lectures and presenters. Approval to conduct this survey was obtained by the institutional review board of SCU.

Data from the surveys were entered into SPSS for Windows version 14.0 (SPSS Inc, Chicago, IL). Data cleanup was performed to correct values that were outside the range of valid choices by looking up the responses on the original survey. Several questions were found to have responses that were chosen by few students. In these cases, either low frequency responses were subsumed into the Other category or the variable was dichotomized to add to the study's statistical power. Frequencies and Chi Square tests were calculated as appropriate. Inferential tests were not calculated for subgroup analysis because the small number of individuals in some groups would lead to a loss of validity. Due to the large number of comparisons conducted, a Bonferroni correction was calculated and the p-value for significance was set at 0.004.

RESULTS

A total of 113 students were enrolled in the two classes. Ninety nine students completed a pre-class survey (87.6%) and 106 a post-class survey (93.8%). Demographic factors were similar for both classes (data not shown), and these were combined together for the remainder of the analysis.

Demographics and Personal Factors

Table 1 describes the students in terms of demographics and personal factors.

Community Health Knowledge

Students were asked about their familiarity with some of the basic concepts and components of the public health system: Healthy People 2010, public health agencies, reportable diseases, the relationship between lifestyle factors and health, and vaccinations (Table 2). Almost all of the students in the pre-survey knew that there was a relationship between lifestyle factors and health. A majority of students in the pre-class survey considered themselves knowledgeable about the subjects of the other four questions, and the proportion of students who felt this way increased significantly in the post-class survey. Subgroup analysis of the questions regarding community health knowledge was performed. When students were stratified by gender, age, ethnicity, religious background or political philosophy there was little difference between groups (data not shown).

Community Health Attitudes

Seven survey questions asked about the students' attitudes about the value of vaccinations, statistics and public health/health promotion (Table 3). A minority of students in the pre-class survey agreed with the questions on statistics and vaccinations, while large majorities agreed it was important to understand about and utilize public health/health promotion. There were improvements in the attitudes of these students from the pre- to post-class surveys, but none of these changes reached statistical significance. The largest change was in the number of students who felt it is important for chiropractors to work with public health agencies and community health resources (59.6% pre- to 77.4% post-class survey, p=0.006).

Table 1. Demographics and Personal Factors

		Pre-Course Survey	Post-Course Survey
Gender	Female	28.3%	34.0%
	Male	71.7%	66.0%
Age	18–24	30.3%	25.5%
	25–34	52.5%	57.5%
	35+	17.2%	17.0%
Ethnicity	Asian	32.3%	24.8%
	Hispanic	15.6%	17.1%
	White	46.9%	48.6%
	Other	5.2%	9.5%
Importance of Religion	Very Important	43.4%	47.2%
	Somewhat Important	30.3%	34.9%
	Not Sure/Not Stated	26.3%	17.9%
Political Philosophy	Conservative	34.0%	28.3%
	Center	38.1%	37.7%
	Liberal	27.8%	32.1%
Have Children	No	87.2	81.01
	Yes	12.8	19.0
Health Status	Excellent/Very Good	58.6%	63.2
	Good/Poor	41.1%	36.8%

Table 2. Cross Tabs Knowledge Pre- vs. Post-Class Survey

	Pre-Class Survey	Post-Class Survey	Difference	P value
I know about Healthy People 2010	61.9%	99.1%	37.2%	<0.001[a]
I know about public health agencies	59.2%	96.2%	37.0%	<0.001[a]
I know about reportable diseases	58.3%	96.2%	37.9%	<0.001[a]
There is a relationship between lifestyle factors and health	99.0%	99.1%	0.1%	[b]
I am familiar with the risks and benefits of vaccinations	83.8%	96.2%	12.4%	0.003[a]

[a] Statistically significant at the 0.004 level [b] Not calculated because of low expected cell counts in 1 or more cells

Table 3. Cross Tabs Attitudes Pre- vs. Post-Class Survey

Question	Pre-Class	Post-Class	Difference	p-value
Statistics are very important	32.3%	47.2%	14.9%	0.03
Vaccination is very important	45.9%	54.7%	8.8%	0.21
Children should always be vaccinated against common infectious diseases	37.8%	46.2%	8.4%	0.22
I would always advise patients to have their children vaccinated	33.3%	41.5%	8.2%	0.23
It is very important for practicing chiropractors to understand the concepts of public health and health promotion	82.8%	88.7%	5.9%	0.23
It is very important for practicing chiropractors to work with public health agencies and community health resources	59.6%	77.4%	17.8%	0.006
It is very important to utilize health promotion in chiropractic practice	84.5%	91.5%	7.0%	0.124

Community Health Attitudes by Gender

In the pre-class survey, females tended to have better attitudes about the importance of pubic health, particularly in regards to vaccination (Table 4). Males tended to display a greater improvement of attitudes pre-class to post-class, particularly in regards to vaccinations and chiropractors working with public health agencies and community health resources.

Community Health Attitudes by Have Children

In the pre-class survey students with children tended to display better attitudes towards public health concepts (Table 5). Students without children were more likely to feel it is important for chiropractors to utilize health promotion in practice. There was a trend for students who did not have children to display greater improvements in attitudes, particularly the importance public health/health promotion. A noticeable exception was a large change in students with children feeling that it is very important for chiropractors to utilize health promotion in their practices.

Community Health Attitudes by Health Status

On the pre-class survey students who perceived their health status to be good or poor had better attitudes towards public health concepts than those who perceived it to be excellent or very good, particularly the importance of vaccinations (Table 6). Students who felt that their health status was excellent or very good were more likely to report improved attitudes towards public health in the post-class survey. This trend was strongest in the importance of vaccinations.

Community Health Attitudes by Age

There was a trend for students in the oldest age group (35+) to have more positive attitudes towards public health in the pre-class survey (Table 7). This group tended to experience the least change on the post-class survey. Students in the youngest age group (18–24) demonstrated greater improvements in attitudes than those in the middle age group (25–34).

Community Health Attitudes by Ethnicity

Latinos tended to have more positive attitudes towards public health concepts in the pre-course survey than Whites and Asians (Table 8). Latinos were more likely to think that vaccinations are important and that children should always be vaccinated against common infectious diseases, but were less likely to state that they would always advise patients to have their children vaccinated. Latinos were also most likely to have an improvement in attitudes from pre- to post-class survey, particularly

Table 4. Cross tabs community health attitudes vs. gender

	Females			Males		
Question	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change
Statistics are very important	32.1%	50.0%	17.9%	32.4%	45.7%	13.3%
Vaccination is very important	57.1%	58.3%	1.2%	41.4%	52.9%	11.5%
Children should always be vaccinated against common infectious diseases	46.4%	52.8%	6.4%	34.3%	42.9%	8.6%
I would always advise patients to have their children vaccinated	46.4%	41.7%	−4.7%	27.9%	41.4%	13.5%
It is very important for practicing chiropractors to understand the concepts concepts of public health and health promotion	89.3%	88.9%	−0.4%	80.3%	88.6%	8.3%
It is very important for practicing chiropractors to work with public health agencies and community health resources	67.9%	75.0%	7.1%	56.3%	78.6%	22.3%
It is very important to utilize health promotion in chiropractic practice	82.1%	88.9%	6.8%	85.5%	92.9%	7.4%

Table 5. Cross tabs community health attitudes vs. have children

Have Children	No			Yes		
Question	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change
Statistics are very important	34.1%	47.1%	13.0%	25.0%	45.0%	20.0%
Vaccination is very important	46.9%	55.3%	8.4%	41.7%	55.0%	13.3%
Children should always be vaccinated against common infectious diseases	37.8%	44.7%	6.9%	45.5%	50.0%	4.5%
I would always advise patients to have their children vaccinated	31.3%	37.6%	6.3%	45.5%	55.0%	4.5%
It is very important for practicing chiropractors to understand the concepts of public health and health promotion	82.9%	89.4%	6.5%	91.7%	85.0%	−6.7%
It is very important for practicing chiropractors to work with public health agencies and community health resources	57.3%	75.3%	18.0%	75.0%	85.0%	10.0%
It is very important to utilize health promotion in chiropractic practice	88.8%	91.8%	3.0%	66.7%	90.0%	23.3%

Table 6. Cross tabs community health attitudes vs. health status

	Excellent-Very Good			Good-Poor		
Question	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change
Statistics are very important	29.3%	47.8%	18.5%	36.6%	46.2%	9.6%
Vaccination is very important	42.1%	56.7%	14.6%	51.2%	51.3%	0.1%
Children should always be vaccinated against common infectious diseases	38.6%	47.8%	9.2%	36.6%	43.6%	7.0%
I would always advise patients to have their children vaccinated	29.8%	41.8%	12.0%	38.5%	41.0%	2.5%
It is very important for practicing chiropractors to understand the concepts of public health and health promotion	82.8%	91.0%	8.2%	82.9%	84.6%	1.7%
It is very important for practicing chiropractors to work with public health agencies and community health resources	58.6%	77.6%	19.0%	61.0%	76.9%	15.9%
It is very important to utilize health promotion in chiropractic practice	87.5%	94.0%	6.5%	80.5%	87.2%	6.7%

in the questions on statistics, advising patients to have their children vaccinated and the importance of chiropractors using public health agencies and resources.

Community Health Attitudes by Political Philosophy

In the pre-class survey there was a trend for students with a conservative political philosophy to have better attitudes towards public health than those with a liberal philosophy (Table 9). This was particularly the case regarding whether children should always be vaccinated. In the pre- vs. post-class comparison, conservatives and those in the center generally displayed the largest improvements, while students with a liberal philosophy showed the smallest changes.

Table 7. Cross tabs community health attitudes vs. age

Age	18–24			25–34			35+		
Question	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change
Statistics are very important	36.7%	55.6%	18.9%	26.9%	44.3%	17.4%	41.2%	44.8%	3.6%
Vaccination is very important	46.7%	66.7%	20.0%	47.1%	49.2%	2.1%	41.2%	55.6%	14.4%
Children should always be vaccinated against common infectious diseases	26.7%	40.7%	14.0%	42.3%	47.5%	5.2%	43.8%	50.0%	6.2%
I would always advise patients to have their children vaccinated	20.0%	29.6%	9.6%	39.2%	45.9%	6.7%	40.0%	44.4%	4.4%
It is very important for practicing chiropractors to understand the concepts of public health and health promotion	83.3%	92.6%	9.3%	82.7%	86.9%	4.2%	82.4%	88.9%	6.5%
It is very important for practicing chiropractors to work with public health agencies and community health resources	63.3%	77.8%	14.5%	53.8%	77.0%	23.2%	70.6%	77.8%	7.2%
It is very important to utilize health promotion in chiropractic practice	93.3%	100.0%	6.7%	84.0%	90.2%	6.2%	70.6%	83.3%	12.7%

Community Health Attitudes by Importance of Religion in Life

In the pre-class survey, students who felt that religion was important in their life were more likely to support vaccinations (Table 10). In comparing pre-class surveys to post-class, students who felt that religion was of greater importance had a better improvement in valuing the use of health promotion in practice.

DISCUSSION

The ultimate aim of a community health course is to change the behaviors of students after they graduate so that they practice in a manner that promotes the health of their community. While it is impossible for a cross sectional survey of students such as conducted in this study to accurately predict future practice behaviors, changes in behavior are predicated on a positive attitude towards the subject, which in turn are dependant on knowledge of its concepts and benefits. This is an valuable area of study for any health care profession because of the vital importance of health promotion issues in the future health of our nation.[1] The use of health promotion practices by chiropractors is particularly important because they are the most popular doctors among complementary and alternative care providers,[10] seen by approximately 12% of the US population each year.[11] Some chiropractic patients may not receive health promotion information from any other health care practitioner. However, conflicts may develop because although chiropractors have traditionally claimed to be health promotion oriented,[12] they have often been at odds with some standard components of public health practice such as vaccinations.[6,13]

At the beginning of this course in community health, a slim majority of chiropractic students reported that they knew about some of the key components of mainstream public health practice in

Table 8. Cross tabs community health attitudes vs. ethnicity

	Asian			Latino			White		
Question	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change
Statistics are very important	41.9%	53.8%	11.9%	33.3%	61.1%	27.8%	26.7%	39.2%	12.5%
Vaccination is very important	48.4%	57.7%	9.3%	60.0%	55.6%	−4.4%	43.2%	54.9%	11.7%
Children should always be vaccinated against common infectious diseases	48.4%	61.5%	13.1%	53.3%	50.0%	−3.3%	31.8%	39.2%	7.4%
I would always advise patients to have their children vaccinated	48.4%	61.5%	13.1%	20.0%	44.4%	24.4%	25.6%	31.4%	5.8%
It is very important for practicing chiropractors to understand the concepts of public health and health promotion	80.6%	84.6%	4.0%	80.0%	83.3%	3.3%	86.7%	92.2%	5.5%
It is very important for practicing chiropractors to work with public health agencies and community health resources	71.0%	76.9%	5.9%	53.3%	83.3%	30.0%	53.3%	76.5%	23.2%
It is very important to utilize health promotion in chiropractic practice	82.8%	84.6%	1.8%	93.3%	88.9%	−4.4%	86.7%	96.1%	9.4%

the US, including Healthy People 2010, public health agencies and reportable diseases. Larger majorities stated that they knew about the risks and benefits of vaccines and the relationship between lifestyle factors and health. This course appears to have succeeded in increasing students' perception of their knowledge in these areas as by the post-class survey almost all respondents reported being familiar with these. These changes were highly significant except for the question on lifestyle factors, and this was most likely because most students stated that they knew about these on the pre-class survey.

Hawk et al[14] reported on the implementation of a new Wellness Concepts course into a chiropractic college curriculum. A survey of students in the first three iterations of this course revealed large improvements in knowledge about basic public health concepts, such as Healthy People 2010, comparable to the results of this study.

Changes in attitude are generally considered harder to effect than changes in knowledge, but are more important because they are more directly tied to future behaviors. Green[15] conducted a survey of 28 third-year chiropractic students, asking if practicing chiropractors should provide certain health promotion services. Between 62.1% and 93.1% of students thought that chiropractors should provide most of the common health promotion activities listed (e.g., conduct a health promotion patient education program). This closely matches the 91.5% of students in the present post-course survey who agreed with the more general statement that it is very important for chiropractors to use health promotion in practice.

With chiropractic students, attitudes towards vaccinations in particular bear scrutiny because this is the area where chiropractic practitioners traditionally have deviated the farthest from the public health mainstream.[5,6] Hawk et al[16] conducted a survey of chiropractic practitioners, faculty and students, and found that the majority were favorably inclined to provide health education services, especially in the areas of physical activity and nutrition. However, they found that students (80%) and faculty (91%) were much more likely to believe that chiropractors

Table 9. Cross tabs community health attitudes vs. political philosophy

Political Position	Conservative			Central			Liberal		
Question	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change
Statistics are very important	24.2%	46.7%	22.5%	35.1%	62.5%	27.4%	40.7%	26.5%	−14.2%
Vaccination is very important	48.5%	70.0%	21.5%	45.9%	55.0%	9.1%	46.2%	41.2%	−5.0%
Children should always be vaccinated against common infectious diseases	50.0%	60.0%	10.0%	37.8%	50.0%	12.2%	25.9%	26.5%	0.1%
I would always advise patients to have their children vaccinated	41.9%	56.7%	14.8%	32.4%	47.5%	15.1%	25.9%	17.6%	8.3%
It is very important for practicing chiropractors to understand the concepts of public health and health promotion	81.8%	90.0%	8.2%	91.9%	92.5%	0.1%	74.1%	82.4%	8.3%
It is very important for practicing chiropractors to work with public health agencies and community health resources	63.6%	76.7%	13.1%	56.8%	85.0%	28.2%	59.3%	67.6%	8.3%
It is very important to utilize health promotion in chiropractic practice	87.5%	93.3%	5.8%	83.3%	100.0%	16.7%	85.2%	79.4%	−5.8%

should provide both positive and negative information about vaccinations to their patients than private practitioners (62%). Injeyan et al[17] found that there was an association between chiropractors' attitudes towards vaccination and where they felt that they had received the most education on the subject. Doctors who felt that they had learned more on the subject from post-graduate courses than undergraduate education were more likely to be anti-vaccination. Rusell et al[18] found that the behavior of a sample of chiropractic practitioners towards vaccinations, either pro or against, was closely tied to their beliefs on the efficiency and risks of vaccinations, chiropractic philosophy and individual rights.

In this study's pre-class survey only a minority of students agreed that vaccinations are very important (45.9%), that children should always be vaccinated against common infectious diseases (37.8%) and that the student would always advise their patients to have their children vaccinated (33.3%). While the percentage of students who agreed with these statements did improve somewhat by the post-class survey, the majority still did not agree that children should always be vaccinated or that they would advise their patients this way. Busse and colleagues[19] found that 62.0% of second-year students in a chiropractic college were generally in favor of vaccinations, and 56.2% would vaccinate their children with any of the currently recommended vaccines. This survey was conducted in a chiropractic college that is considered among the most scientifically oriented, which may account for some of the differences with the findings of the current study.

Only 32.3% of the pre-class respondents felt that statistics are very important. This may reflect students' lack of knowledge of the relevance of statistics in determining the epidemiology of patients' conditions or the effectiveness of therapies. It may also be a result of a tradition of chiropractors relying more on anecdotal reports than empirical evidence for determining their therapeutic approach to their patients' conditions.[20,21]

As was expected, a majority of students in the pre-class survey felt that public health and health promotion were important for practicing chiropractors. This percentage increased to a small degree by the post-class survey. Hawk et al., reported that

Table 10. Cross tabs community health attitudes vs. importance of religion

Religions is Very Important in my Life	Yes			No		
Question	Pre-Class	Post-Class	Change	Pre-Class	Post-Class	Change
Statistics are very important	37.20%	48.00%	10.80%	31.40%	45.50%	14.10%
Vaccination is very important	51.20%	58.00%	6.80%	45.10%	52.70%	7.60%
Children should always be vaccinated against common infectious diseases	47.60%	50.00%	2.40%	33.30%	41.80%	8.50%
I would always advise patients to have their children vaccinated	42.90%	44.40%	1.50%	28.00%	38.20%	10.20%
It is very important for practicing chiropractors to understand the concepts of public health and health promotion	88.40%	90.00%	1.60%	78.40%	87.30%	8.90%
It is very important for practicing chiropractors to work with public health agencies and community health resources	67.40%	80.00%	12.60%	56.90%	74.50%	17.60%
It is very important to utilize health promotion in chiropractic practice	86.00%	98.00%	12%	83.70%	85.50%	1.80%

after taking a Wellness Concepts course, chiropractic students indicated that they were more likely to use several public health agencies and resources upon practicing in the future.[14]

In the pre-class survey, a positive attitude towards public health concepts tended to be associated with being female, older, Latino, politically conservative and more religious, and with having children and a poorer perceived health status. Not surprisingly, the groups with the biggest improvements in positive attitudes in the post-class survey were those who had started with the poorest. Latinos and politically conservative students generally started out with positive attitudes and had greater improvements from pre- to post-class surveys.

Interestingly, in the pre-class survey Latinos were more likely to think that vaccinations are important (60.0%) and that children should always be vaccinated against common infectious diseases (53.3%), but were less likely to state that they would always advise patients to have their children vaccinated (20.0%). This could be interpreted as possessing a passive attitude towards the subject of vaccinations. By the post-class survey 44.4% of Latino students felt empowered to advise patients in what they believed about vaccinations.

Changes in knowledge and attitudes of course do not guarantee that these students will actually use what they learned in this class after graduation. Globe et al[22] described how a chiropractic college changed its public health course to include a greater emphasis on health promotion. In a follow-up study, they analyzed charts of patients that were treated by chiropractic interns after the new course was instituted and compared them to previous patient charts.[23] They found no increase in the use of preventive services by these interns. The authors speculated that the course was too focused on didactic education and occurred too early in the curriculum to affect the behaviors of these interns, factors that would likely hold true for the students in the current study also.

Strengths and Limitations of this Study

A strength of this study was the relatively high response rates (87.6% pre-class and 93.8% post-class) across two iterations of the course. High response rates help ensure that survey results are reflective of the population as a whole.

A limitation to the interpretation of the results of this study was that the survey instrument was self-designed, and no measures of its reliability or validity are available. Because of time pressures no pilot testing of the instrument was performed, and some questions were later found to not be optimally clear to the respondents. For future studies, vague questions such as "Statistics are important" should

be made more meaningful (e.g., Knowledge of basic statistics is important for a practicing chiropractor).

This survey only included second-year chiropractic students. As students progress through health care practitioner colleges they learn not only from the explicit curriculum but also from the hidden curriculum, directed by exposures to fellow students, faculty and private practitioners working as preceptor doctors.[24] In the case of chiropractic education, many of the practitioners who influence students are against vaccinations.[6,16] SCU, like most chiropractic colleges, mostly addresses vaccinations formally in a second year community health course and does little to counter the hidden curriculum in the students' later years. Thus, higher year students would be likely to have poorer attitudes towards vaccinations. This was found by in a survey of students in one Canadian chiropractic college.[19] While 60.7% of first-year students surveyed supported vaccinations, only 39.5% of fourth-year students felt the same. A majority of students (54.8%) felt that informal lectures in the curriculum were negative towards vaccinations.

The contents of this survey course on community health have been based on a model public health course designed by the Chiropractic Health Care Section of the APHA.[7,8] Although this course is likely similar to those of colleges of other types of health care professions, the results obtained in this study may differ because of varying philosophies of health care among students.

CONCLUSION

A course on community health in a chiropractic college appears to have been successful in increasing the knowledge of students about basic public health and health promotion concepts. To a lesser degree it also appears to have improved students' attitudes about these subjects, even in the traditionally controversial subject for chiropractors of vaccinations. Changes in attitude seemed to be associated to some degree with demographic and personal factors of the students. Future studies should compare these findings to students in other health care professions, examine educational strategies to make community health course offerings more germane to the students as they begin to treat patients and track students after they graduate to determine if there are any changes in practice behaviors.

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