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The Complementary and Alternative Medicine use of Health Services Vocational School Students During Covid-19

Covid-19 Döneminde Sağlık Hizmetleri Meslek Yüksekokulu Öğrencilerinin Tamamlayıcı ve Alternatif Tıp Kullanımı

ABSTRACT
Objective:
This research was conducted to evaluate Health Services Vocational School Students use of complementary and alternative medicine (CAM) methods against Covid-19.

Material and Methods:
This research was designed as a descriptive study. Data were collected from October 1st to October 30th, 2021. A questionnaire form developed by the researchers following the literature was used for data collection. The questionnaire was converted into an online form and delivered to the participants. The IBM SPSS Statistics 22 program was used for data evaluation.

Results:
78% of the students participating in the study were female, and 22% were male. The mean age was 20.81, and the standard deviation was 3.02. It was identified that the participants' monthly income was between 1500-2000 YTL at a rate of 71%. 25% of the participants had Covid-19, 95% were vaccinated, 16% used CAM when they had Covid-19, 35% heard the of CAM on the internet, complementary and alternative medicine use among those who took CAM training was 41%, vitamin D usage ranked first at a 59.1% rate, and those who received CAM training were 41%.

Conclusion:
The use of CAM of the participants during Covid-19 was 16%. It was observed that CAM use was low, there was a positive change in the behaviors of those trained in CAM, and there was no gender difference regarding CAM use.

Key Words:
CAM, University student, Covid-19

ÖZ
Amaç:
Bu çalışma, Covid-19 enfeksiyonundan korunmak için Tamamlayıcı ve Alternatif Tıp (TAT) yöntemleri kullanımı açısından, Sağlık Hizmetleri Meslek Yüksekokulu öğrencilerinin yaklaşımlarını değerlendirmek amacıyla yapıldı.

Gereç ve Yöntemler:

Çalışma, tanımlayıcı tipte planlandı. Veriler 1 Ekim-30 Ekim 2021 tarihleri arasında toplandı. Veri toplamada, araştırmacılar tarafından literatür doğrultusunda geliştirilen anket formu kullanıldı. Anket formu internet üzerinden katılımcılara ulaştırıldı. Verilerin değerlendirilmesinde IBM SPSS Statistics 22 programı kullanıldı.

Bulgular:

Araştırmaya katılan öğrencilerin %78'i kadın, %22'si erkektir. Yaş ortalaması 20,81 ve standart sapması 3,02 bulunmuştur. Katılımcıların aylık gelir durumu %71 oranında 1500-2000 YTL arası olduğu görüldü. Öğrencilerin %25'inin Covid-19 geçirdiği, %95'inin aşı olduğu, % 16 sının Covid-19 geçirdiğinde TAT kullandığı, %35 inin TAT kavramını internetten duyduğu, TAT eğitimi alanların içinde tamamlayıcı ve alternatif ilaç kullanımı % 41 olduğu, D vitamini kullanımının %59,1 oranıyla ilk sırada yer aldığı, TAT eğitimi alanların %41 olduğu bulundu.

Sonuç:

Katılımcıların Covid-19 hastalığında TAT kullanım oranı %16 olarak bulundu. TAT kullanım oranı oldukça düşük olduğu, tat kullanımı konusunda eğitim alanların davranışlarında olumlu yönde değişim olduğu, TAT kullanımı bakımından cinsiyete göre bir farklılık olmadığı görüldü.

Anahtar Sözcükler:

TAT, Üniversite öğrencileri, Covid-19

INTRODUCTION

There is no denying the increase in using traditional methods to protect health and reduce signs of disease in recent years. There are many different traditional medicine practices and different treatment methods related to them worldwide. These methods, which have existed throughout the history of humanity, keep strengthening and becoming more widespread (1).

Alternative medicine is used instead of scientific medicine applications. On the other hand, complementary medicine uses alternative medicine products and methods and the treatment protocols of modern medicine. According to the World Health Organization's (WHO) definition of traditional medicine, it is the whole of knowledge, skills, and practices based on theories, beliefs, and experiences specific to different cultures, which are used in the maintenance of health and the prevention, diagnosis, improvement or treatment of physical and mental diseases (1-4). The most preferred CAM methods are massage, acupuncture, herbal products, cupping, acupressure (Shiatsu), yoga, therapeutic touch, hydrotherapy, reflexology, bioenergy, music, relaxation, imagination, and vitamin supplements (3-6).

Although alternative and complementary medicine concepts differ, they are often used together. Complementary-Alternative Medicine (CAM) consists of special medicine methods that use natural substances and special solutions, different treatment and exercise techniques to protect physical and mental health, reconcile the person with themselves, their family, and their environment to get to know themselves better. There is currently no proven cure for Covid-19, although it has affected our country and the whole world for approximately 1.5 years (6-8). While the efficacy, safety, mode of action, quantity, and desired physiological response expected from a drug are the most important features in the modern treatment and drug concept, "herbal medicines" are becoming increasingly popular worldwide. More than 80% of the world's population uses Complementary and Alternative Medicines (CAM). CAM is becoming an increasing component in the US healthcare system, with 70% of the population using it at least once and costing $34 billion a year. Since the National CAM Center establishment, basic science and therapeutic-based clinical studies on CAM have significantly increased. The worldwide herbal medicine market, including herbal products and raw materials, is projected to grow by 5% to 15% per year. The world herbal medicine market is estimated at $62 billion, and it is estimated to grow to $5 trillion by 2050. The global pharmaceutical market was valued at $550 billion in 2004 and grew to $900 billion in 2008. Herbal sources of immune-enhancing substances are consumed in many countries to promote health, increase the body's normal resistance to infectious agents, and prevent and treat various diseases. However, these drugs are sometimes sold under inappropriate conditions without a license or approval. There is not enough scientific evidence about the effectiveness of some of these drugs (7-11).

This study was conducted to evaluate the approach of Health Services Vocational School Students in using CAM to prevent Covid-19.

MATERIAL and METHODS

This research was designed as a descriptive study. The universe and sample of the study were made up of all of the students at Bitlis Eren University Vocational School of Health Services. Without selecting the study sample, volunteers were included in the study. The population of the study consisted of 1200 students studying at Vocational School of Health Services. The sample consisted of 550 students. Data were collected from October 1st to October 30th, 2021. The "Survey Form" prepared by the researcher in line with the literature was used for data collection. The socio-demographic questions in the first part of the questionnaire included the health vocational school students' age, gender, department, and monthly income. The second part consisted of whether the students had chronic diseases and whether they had Covid-19 or not. The third part asked whether the students received training on complementary and alternative medicines, if they heard about it (if so, from what source), if they used this type of medicine (if so, which one, why, and how frequently?), how much they spend on these types of drugs monthly. The final section of the questionnaire aimed to identify students views on descriptive and alternative drug use. Participant answers were evaluated based on their answers given on a 5-point Likert-type scale. The lowest score that could be obtained is 0, and the highest is 5. An online form was created via Google forms and sent to the participants online. The incomplete answers were excluded from the evaluation. This research complies with all the relevant national regulations, institutional policies and is in accordance with the tenets of the Helsinki Declaration. Consent was obtained from

the participants, and has been approved by the Bitlis Eren University Ethics Committee (approval number: 21/9-3 1064).

Statistical Evaluation

SPSS programs were used to evaluate the data obtained from the research, and frequency distribution, average, and comparative analyses were made. Chi-square tests were used to examine whether there was a difference between students' CAM use, depending on their gender, department, and whether they were trained in CAM methods. An independent sample t-test investigated the differences between complementary and alternative drug use between those who had Covid-19 and those who did not. Although the Kolmogorov-Smirnov normality test results indicate that the variables are not distributed normally, because of the Central Limit Theorem, the distribution of sample means converges to a normal distribution as the sample size is sufficiently large in both groups (sample size of those who had Covid-19 is 136 and the sample size of those did not have Covid-19 is 414). The t-test also investigated the differences between students views who received and did not receive CAM training on whether complementary and alternative drugs protected Covid-19. The $p < 0.05$ was considered statistically significant in the comparisons.

RESULTS

78% of the students participating in the study were female, and 22% were male. The mean age was 20.81, and the standard deviation was 3.02 (Table I).

Table I. Demographics of participants

Age	
Average	20.81
Standard deviation	3.02
Gender	**%**
Female	78%
Male	22%

The participants' distribution according to the departments they attend is given in the Table II. Table III shows the participants' monthly income distribution and in Table IV the distribution of the answers given by participants to various questions is given. Table V and Table VI provide joint frequencies and relative joint frequencies of CAM Training and Cam Usage variables.

Table II: Participants distribution according to the departments they attend

Department	Number	%
Anesthesia	51	11%
Child Development	88	19%
Disables Care and Rehabilitation	27	6%
Nursing	49	11%
First Aid and Emergency Aid	54	12%
Optician	24	5%
Pathology Laboratory Techniques	51	11%
Social Services	24	5%
Medical Imaging Techniques	30	6%
Elderly Care	64	14%

Table III: The participants' monthly income distribution

Monthly Income	Number	%
1500-2000	252	71%
2001-2500	27	8%
2501-3000	29	8%
3001-3500	11	3%
3501-4000	5	1%
4001-4500	8	2%
4501-5000	8	2%
5001 and over	16	5%

Table IV. The distribution of the answers given by participants to various questions

Which CAM medicines did you use?		
Vitamin D	110	59.10%
Black cumin	38	20.40%
Calcium	15	8.10%
Zinc	6	3.20%
Propolis	6	3.20%
B12	3	1.60%
Quercetin	3	1.60%
Herbal teas	1	0.50%
Ginkgo biloba	1	0.50%
Spraydin	1	0.50%
Vitamins	1	0.50%
Adder's tongue	1	0.50%
If you use complementary and alternative medicines, what is the reason:		
I didn't think about it	146	56.20%
To be healthy	96	36.90%
Habit	13	5.00%
To prevent cramps	1	0.40%
To cure my illness	1	0.40%
I use B12 because I am vegan	1	0.40%
Due to my vitamin deficiency	2	0.80%
How often do you use complementary and alternative medicines?		
Once a year	104	47%
Once a month	48	22%
Once a week	22	10%
Every day	24	11%
Twice a week or more	21	10%
How much do you spend on complementary and alternative medicines monthly?		
Less than 50 YTL	160	73%
51-100 YTL	32	15%
101-150 YTL	8	4%
151-200 YTL	5	2%
201-250 YTL	3	1%
More than 251 YTL	12	5%

Table IV. Continued

Have you had Covid-19?			
	Yes	136	25%
	No	413	75%

If you had Covid-19, how did you recover?		
I was treated at home.	103	73%
I didn't notice it.	27	19%
I was treated at the hospital.	9	6%
I was in intensive care.	3	2%

Have you had the Covid-19 vaccination?		
Yes	521	95%
No	29	5%

Have you received training on complementary and alternative medicine?		
Yes	34	6%
No	511	94%

If you had Covid, did you use any complementary and alternative medicine?		
Yes	32	16%
No	164	84%

Did you hear about complementary and alternative medicine?		
Yes	233	43%
No	312	57%

Where did you hear about complementary and alternative medicine?		
Internet	122	35.30%
Television	69	19.90%
Social media	58	16.80%
School	51	14.70%
Family	16	4.60%
Friend	13	3.80%
Hospital	5	1.40%
Newspaper	3	0.90%
Workplace	3	0.90%
Radio	2	0.60%
Health worker	2	0.60%
Books	1	0.30%
Phone notification	1	0.30%

Table V: CAM Training * CAM Usage Joint Frequency Table

		CAM Usage		
		Yes	No	Total
CAM Training	Yes	14	20	34
	No	37	474	511
Total		51	494	545

Table VI: CAM Training *CAM Usage Relative Freguengrey Table

CAM Training	CAM Usage		
	Yes	No	Total
Yes	41%	59%	100%
No	7%	93%	100%

While complementary and alternative drug use was 41% among those who received CAM training, this rate was 7% in the group who did not receive training. This shows the importance of receiving CAM training to increase the use of CAM.

There was no statistically significant difference at the 0.05 level between the students' views who received and did not receive CAM training on whether complementary and alternative medicine use protects from Covid-19 (z-value = -1,2271, p-value = 0.2198).

A t-test was used for independent groups to determine whether there was a difference between the frequency of complementary and alternative drug use in the group that had Covid-19 and the group that did not. In the analysis of the answers given to the question "I Yfrequently use complementary and alternative medicines" according to the Likert scale, no statistically significant difference was found between the groups. Cohen's d effect size value of the t-test was 0.328. This is a small effect size. When the effect size was 0.3, the statistical significance level was 0.05, the power of the test was 0.90, and the required sample size was 469. The sample size in this study, 550, satisfies this requirement. As a result of the t-test, a statistically significant difference at the level of 0.05 was found between the frequency of using complementary and alternative drugs among students who had and did not have Covid-19 (z-value = 1.979, p-value = 0.0478). Cohen's d effect size of this difference was small (Cohen's d = 0.328).

DISCUSSION

In addition to scientific and modern medicine, there has been an increase in traditional medicine, alternative medicine or complementary medicine applications. In addition to being widely used worldwide, their usage rate is higher in some world countries (1,10). Many studies are conducted with various groups on the subject in this context. In our study with university students, 78% were female, and 22% were male. The mean age was 20.81, and the standard deviation was 3.02. When the income status of the participants is examined, it is seen that the rate of students with 1500-2000 YTL income is 71%. When the participation rates were examined according to their departments, it was identified that 19% were in child development and 14% in elderly care. 25% of the participants had Covid-19, 95% had the Covid-19 vaccine, and 16% used CAM when they had Covid-19.

The mean age in the study was 20.81. When similar studies are examined, a positive relationship was found between age and CAM use in students, and that CAM use increases with age. Studies report that the age range of CAM use is 39-65 years. Many studies show that CAM use is more common among middle-aged and elderly groups. This situation supports the directly proportional relationship between age and CAM use (12-14).

In this study, the CAM usage rate was 16%. The usage rate of complementary and alternative medicine for our country was 12.60% - 86.30% in similar studies when the literature was examined. Oğlakçı Ilhan et al.'s study with university students in 2018 determined that participants rate of using TCME (Traditional and Complementary Medicine Education) was 29%. However, when the literature is examined, the rate of CAM use

was moderate or high in similar studies. In the study conducted by Solmaz and Altay with university students in 2019, the rate of CAM use was 89.5%. Similarly, the frequency of CAM use was 61.2% in Araz et al.'s 2012 study. In contrast, this was 50.0% in Sönmez et al.'s study (12, 15-18).

When the students were asked whether they had received CAM training before, it was identified that 94% of the participants did not receive any training. In a similar study, it was determined that the students did not have sufficient knowledge about CAM use, and in another study, 94.7% of the students reported that they did not receive training on CAM (19). In this study, in which the use of CAM was very low, the majority of the students did not receive training on CAM methods, and the rate of students CAM use was 59%. In the study, a statistically significant correlation at 0.05 was found between CAM drugs use and whether the student received training on CAM. This is the importance of CAM education and the low usage rate due to no CAM education.

When the source CAM knowledge was questioned, 35% of the participants heard of it from the internet. There are many studies in the literature with similar findings. Solmaz and Altay (2019) reported that 55.9% of students had access to CAM information via the internet. Similarly, Doğanay et al., reported that 52.4% of the students accessed CAM information via the internet. In the same way, Açıkgöz et al., suggested that 56.4% of the students found information on CAM methods via the internet (12,19,20).

To the question "Which CAM drug did you use most" 59.1% of the participants reported that they used vitamin D, 20.4% black cumin, and 8.1% used calcium-containing drugs. Similar studies have been found in the literature. Doğanay et al. found that the use of supplemental vitamins was 24.0% among participants, and the usage rate of herbal treatment products was 21.4%. Barutçu et al., found that iron and vitamin D usage was 60.7% and 83.3%, respectively (19-22).

As to why the participants used CAM, 56.22% of the participants answered, "I didn't think about it", and 36.9% said it was to be healthy. Similar studies have been found in the literature. Yıldırım et al., 2010 reported that most students found modern non-medical treatments beneficial (23). Solmaz and Altay (2019) stated that 67.6% of the participants reported using complementary and alternative therapies because they found them beneficial for health (12).

The study analyzed whether there is a relationship between complementary and alternative drug use and gender, but no statistically significant relationship was found between these two variables. There are similar studies in the literature. In Aktaş's study, no statistically significant difference was reported regarding the use of CAM by demographic characteristics such as gender, class, educational status of parents, place of residence, and the number of siblings (24-27).

Limitations of the study:

The study's generalization is limited to university students because it was conducted among a single unit of associate degree health students in the East.

CONCLUSION

The use of CAM of the participants during Covid-19 was 16%. It was observed that CAM use was low, there was a positive change in the behaviors of those trained in CAM. It is recommended that the study be carried out with larger student groups, whether regional or country-wide.

There are many studies on the use of CAM in the literature. However, there was no study on Covid-19 and students use of CAM. We believe that this study will contribute to the literature in this respect.

Ethics Committee Approval:
This research complies with all the relevant national regulations, institutional policies and is in accordance with the tenets of the Helsinki Declaration, and has been approved by the Bitlis Eren University Ethics Committee (approval number: 21/9-3 1064).

Informed Consent:
All the participants' rights were protected and written informed consents were obtained before the procedures according to the Helsinki Declaration.

Author Contributions:
Concept – S.A., H.Ö.A; Design – S.A., H.Ö.A; Supervision – S.A; Resources – H.Ö.A., S.A; Materials – S.A., H.Ö.A; Data Collection and/or Processing – H.Ö.A; Analysis and/ or Interpretation – S.A; Literature Search – H.Ö.A; Writing Manuscript – H.Ö.A; Critical Review – S.A.

Conflict of Interest:
The authors have no conflict of interest to declare.

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