The Evaluation of Anti-Vaccination in Academicians

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ABSTRACT:
Purpose: It was aim to determine what academicians from certain socio-cultural groups of the society think about vaccines.
Method: The universe of the research consists of academic staff working at Sivas Cumhuriyet University. In the study, between April 2021 and May 2021, by applying the online form, 104 volunteers who volunteered to participate in the research were reached, without using the sample selection method. After obtaining the necessary ethical and official permissions, data were collected using the socio-demographic characteristics form and the anti-vaccine scale.
Results: The mean of total anti-vaccination among academicians was 1.99±0.80. Although it was determined in this study among academicians that the mean anti-vaccine score was low and the academicians were not anti-vaccine, the opinion that the vaccine has no effect on the Covid-19 process and will not end the pandemic is significantly high.
Conclusion: Although there are many factors that can cause the idea of vaccination rejection, it has been seen in many studies that the training and counseling provided are quite effective. Therefore, it is very important to raise awareness of the academicians, who are highly educated and open to education, about vaccination.
Keywords: Anti-vaccine, Academician, Covid-19

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INTRODUCTION

The World Health Organization (WHO) defines immunization as protecting the body from certain diseases through vaccines. Immunization is a method in which individuals are made resistant or immunized against an infectious disease, typically by administration of a vaccine (WHO, 2019). Immunization aims to enable the body to create an immune response that can eliminate it when exposed to an infectious agent, and to remember and repeat it every time it encounters that agent (Plotkin et al., 2013). Vaccination provides both personal protection and reduces the incidence of the disease in the community, following the decrease in the contact of unvaccinated individuals with the causative agent, thanks to the vaccinated people, and this is called herd Immunity (Healty People, 2020). A vaccine is a biological preparation that develops immunity to a particular disease. Vaccine is a biological agent that is separated from the disease-causing properties of microorganisms that cause disease in humans and animals and given to the bodies of healthy people in certain amounts (Kearney and Pettit, 2016). Vaccines are biological products that provide protection against diseases by stimulating the immune system when they are administered into the organism, with reduced virulence or prepared from non-living microorganisms themselves or certain parts of them, and they are biological products that have the effect

of creating humoral or cellular immunity by producing antigen-specific antibodies (Artenstein, 2016). A vaccine typically contains a substance that resembles the disease-causing microorganism. This substance is the weakened or killed form of the microorganism, its toxins or surface proteins. This substance enables the microorganism to be recognized, remembered and destroyed more easily in case the immune system encounters foreign microorganisms again later; for this, it stimulates the body's immune system (Ataç and Aker, 2014).

The vaccination program is; aims to prevent vaccine-preventable infectious diseases, as well as to prevent deaths or permanent sequelae from infectious diseases. (Kutlu and Altundis, 2018). Individual immunity is formed by vaccination and individuals are protected from the disease. In addition, social immunity is acquired. The increase in the number of vaccinated people in the community reduces the possibility of contact of unvaccinated people with the disease agent and the incidence of the disease in that community (Tercan, 2020). Therefore, one of the most effective methods to protect and maintain health is vaccination. Vaccine-preventable diseases are common all over the world and constitute a serious problem. In terms of cost-effectiveness considerations, vaccines are the cheapest healthcare. Vaccination prevents approximately 3 million deaths and 750,000 disabilities worldwide each year. Despite this, vaccines are underused worldwide and diseases that can be prevented by vaccines still continue to be a threat (Velipasalıoğlu, 2020). Since 2007, vaccination rates for each antigen have been over 95% in our country. In the period before 2007, despite the mandatory vaccination, vaccination rates remained around 75% (Argüt et al., 2016). The reasons for this could be listed as the geographical location and climatic characteristics of the country, irregularities in the record keeping system, lack of legal measures and negative financial incentives for health professionals (Toreci, 2012). In other words, although there was no rejection of the vaccine, there were difficulties in reaching the vaccine. However, many government policies were effective in increasing the vaccination rates afterwards. Despite all this, the concepts of "vaccine indecision-vaccine rejection" were introduced

around the world in the 2000s, and the increasing cases of vaccine rejection led to a decrease in vaccination rates and an increase in the incidence of vaccine-preventable diseases (Bozkurt, 2018). Vaccine refusal, in other words, anti-vaccination is the situation of not having all vaccines made with the will to refuse (Yuksel and Topuzoğlu, 2019).

For vaccination strategies to be successful, it is based on communities' ideas about the benefits or risks of vaccines, as well as on the confidence they have in vaccination. Gathering more information on social hesitations about vaccines and the factors that cause them affects vaccination strategies. In the study, which included a systematic analysis of 145 articles on the perception of risk related to vaccines, it was seen that the main concern in the society about vaccination is against vaccine safety, leading to an opinion that the risks of vaccines outweigh the benefits (Karafillakis and Larson, 2017). In recent years, it has been observed that anti-vaccine views have spread rapidly through the use of the internet and especially the developing social media. Anyone with access to the Internet can now publish their views. Again, especially on health-related issues, the internet is widely used to obtain information and opinions. The most interesting common feature of anti-vaccine speeches is that they are not evidence-based. The common feature of all of them is based on thought systems such as belief and dogma (Ataç and Aker, 2014). Due to the recent increase in cases of anti-vaccination in the world, WHO has added 'Anti-vaccination' to the top of the global health problems (WHO, 2019). The rising trend of the idea of vaccine rejection negatively affects community immunization. This situation has led to the need to focus on groups that are against the vaccine and rejecting the vaccine. Although there are many studies in the literature on anti-vaccination or rejection, no anti-vaccine studies have been found on academic staff, considering the current pandemic. It is a matter of curiosity what academicians from certain socio-cultural groups of the society think about vaccination and how they will affect the students they teach. In this context, it is very important to evaluate what academic staff think about vaccination in general and how these views have affected their perspectives on the Covid

vaccine.

MATERIAL and METHODS

Purpose and Type of the Study

It was planned as a descriptive study in order to evaluate the anti-vaccination opposition in academicians.

Hypotheses

H_0 : There is no significant relationship between the sociodemographic characteristics of academicians and their anti-vaccine scores.

H_0 : Academicians are anti-vaccine.

H_0 : There is no significant relationship between anti-vaccine and mask distance hygiene.

Sampling and participant

The sample selection method was not used in the study conducted with the convenience sampling method. Convenience sampling is a type of nonprobability sampling, for example, a group of people who are easy to contact or reach. There is no other criterion for the sampling method other than that people are available and willing to participate. Moreover, this type of sampling method does not require the creation of a simple random sample, as the only criterion is whether or not the participants agree to participate. The population of the study consists of 1975 academic staff working at Sivas Cumhuriyet University. The study was carried out between April 2021 and May 2021. 104 academic staff were reached without using the sample selection method. In the study, in which the sample was determined by the convenience sampling method, online form links were created in order to ensure that all academicians willing to participate in the research could participate in the study online. Data collected in the created links.

Data Collection Tools

The data started to be collected with the approval of Sivas Cumhuriyet University Rectorate Legal Counseling Ethics Committee dated 02.04.2021 and numbered 29059.

Descriptive Characteristics Form: It is a form consisting of 12 questions prepared by the

researchers in line with the relevant literature (Gender, age, title, marital status etc.)

Vaccine Opposition Scale: The long form of the scale consists of 21 questions with 5-point Likert-type answers, and the higher the score, the higher the vaccine opposition.

Statistical Analysis

After the forms were sent online to the online link academic staff, they were asked to fill in and the Statistical Package for the Social Sciences (SPSS) for Windows 22.0 statistical package program was used to evaluate the data. Descriptive statistics, Indipendent t-test, One-Way ANOVA, Kruskal Wallis test statistical analysis methods were used in the evaluation.

Ethical Approval

The data started to be collected with the approval of Sivas Cumhuriyet University Rectorate Legal Counseling Ethics Committee dated 02.04.2021 and numbered 29059.

RESULTS

The sociodemographic characteristics and scale scores of the academicians participating in the research are given below.

Table 1 shows the socio-demographic distribution of the people participating in the research. Accordingly, 67.3% of the sample was between the ages of 20-40, 56.7% were women, 71.2% were married, and a large majority (84.6%) had an additional chronic disease. While the maximum number of years of working in the profession is between 45.2% and 5-10 years, it has been observed that 81.7% of the academicians have not been diagnosed with Covid before. On the other hand, the number of academicians (57.7%) who believe that the vaccine can end Covid is quite high. The vast majority (55.8%) of the participants in the study reported that the most effective way of protection was to wear a mask (Table 1).

In this study, which was conducted among academicians, the average score of anti-vaccine was low and it was determined that the academicians were not anti-vaccine, but the opinion that the

vaccine has no effect on the Covid-19 process.

For mask-distance and hygiene, one of the most important protection measures during the covid process, mask score was 1.83±0.74, social distance score was 2.37±0.93, hygiene/hand washing score was 1.96±0.58. There was a difference between the groups in terms of mask, distance and hygiene (p<0.05). According to data, there is the opinion that the most effective way of protection in academicians is the mask (Table 2).

Table 1. Socio-Demographical Distribution of Academic Staff Participating in the Research

		n	%
Age	20-40	70	67.3
	41-60	34	32.7
Gender	Female	59	56.7
	Male	45	43.3
Marital status	Single	30	28.8
	Married	74	71.2
Chronic Disease	Yes	88	84.6
	No	16	15.4
Title	Researcher/Lecturer	30	28.8
	Instructor	29	27.9
	Dr. Lecturer	28	26.9
	Associate professor	8	7.7
	Professor	9	8.7
Task Unit	College	4	3.8
	Vocational School	42	40.4
	Faculty	58	55.8
Do you train students in the field of health?	No	51	49.0
	Yes	53	51.0
Years of Professional Work	0-1 years	1	1.0
	2-4 years	8	7.7
	5-10 years	47	45.2
	11-20 years	30	28.8
	Over 20 years	18	17.3
Have you been diagnosed with Covid?	No	85	81.7
	Yes	19	18.3
Can a vaccine end Covid?	No	44	42.3
	Yes	60	57.7
What do you think is the most effective preventive measure?	Mask	58	55.8
	Social Distance	27	26.0
	Hygiene/ hand washing	19	18.3

Table 2. The Relationship between Some Socio-Demographical Characteristics/Opinions of Academicians and the Scale of Anti-Vaccination

	Groups	n	x̄	SD	t	P
Age	20-40	70	2.05	0.78	1.04	0.30
	41-60	34	1.88	0.83		
Gender	Female	59	1.97	0.63	-0.33	0.74
	Male	45	2.03	0.98		
Marital status	Single	30	2.03	0.66	0.31	0.76
	Married	74	1.98	0.85		
Chronic Disease	No	88	2.00	0.74	0.12	0.91
	There is	16	1.97	1.09		
Covid Diagnosis	No	85	1.92	0.68	-2.19	0.03*
	Yes	19	2.35	1.16		
Will the Vaccine End?	No	44	2.35	0.81	4.14	0.00***
	Yes	60	1.73	0.69		
What do you think is the most effective preventive measure?	Mask	58	1.83	0.74	1.24	0.002*
	Social Distance	27	2.37	0.93	0.67	
	Hygiene/ hand washing	19	1.96	0.58	-0.81	

DISCUSSION

The most important step of health services is prevention of diseases. Prevention from diseases both reduces the cost of health as it allows intervention without getting sick, and also causes people to experience less pain because the process is intervened without getting sick. Prevention from diseases allows people to decrease their quality of life and prevent hospitalizations, as well as preventing unnecessary bed occupation. In this way, a budget is allocated for the diseases that need treatment. Vaccination is a very important weapon in the prevention of diseases. Although anti-vaccination has been on the agenda for many years, its importance has increased with the Covid-19 process and has become one of the most frequently encountered issues (Bozkurt, 2018). When we look at the studies conducted with the opposition or rejection of the vaccine, studies among academicians have not been found in the literature. In the study, no significant relationship was found between the age, gender, marital status or presence of chronic disease of the academicians working at Sivas Cumhuriyet University and their anti-vaccine scores. Similarly, in a study conducted on university students receiving health education, it was determined that although there was no significant relationship between sociodemographic characteristics and anti-vaccination, it was determined that students' health education affected their anti-vaccination. Studies have shown that one of the most important reasons for hesitancy about the vaccine is ignorance about the vaccine content, and this gives positive results when the vaccine is informed (Yuksel and Topuzoglu, 2019). Accordingly, the anti-vaccine attitudes of students receiving health education vary according to the education they receive. Another important detail in our study is that the mean scores of anti-vaccine scores of academicians who had Covid-19 were significantly higher than those who did not have covid before. This situation can be interpreted as academicians who had Covid-19 thought they were immunized and decided that there was no need for a vaccine. Although the studies on anti-vaccination are limited, in the study on vaccine rejection of academicians who do not work in the field of health, it was determined that as the education level increases, vaccine rejection decreases and the average of vaccine rejection scores of academicians with children is lower (Damage et al., 2021). In addition, in our study, there is a significant correlation between the mean scores of the academicians who think that the vaccine is a cure for Covid. In other words, it can be said that academicians who understand the vaccine as a remedy are not anti-vaccine. However, in another study conducted on senior medical school students on anti-vaccination, it was determined that vaccine rejection became widespread and therefore epidemic diseases increased (Günay et al., 2020).

CONCLUSION

The concepts of vaccine rejection or anti-vaccination, which have been mentioned quite frequently in recent years, make it very difficult to combat infectious diseases from a social point of view. Although there are many factors that can cause the idea of vaccination rejection, it has been seen in many studies that the training and counseling provided are quite effective. Therefore, it is very important to raise awareness of the academicians, who are highly educated and open to education, about vaccination. The importance of education in the fight against infectious diseases, which we are fighting at the social level, is seen once again. Supporting academicians who provide education in all fields, whether in the field of health or not, with training on vaccination and vaccination will reduce vaccine rejection.

Conflict of Interest

There is no conflict of interest between the authors.

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