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Perceptions and Attitudes of Individuals Over 18 Living in Konya Province About Coronavirus and COVID-19 Vaccine

Konya İlinde Yaşayan 18 Yaş Üstü Bireylerin Coronavirüs ve COVID-19 Aşısına İlişkin Algı ve Tutumları

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ABSTRACT

Objective: The aim of this study is to determine the perceptions and attitudes of individuals over the age of 18 living in Konya about the Coronavirus and COVID-19 vaccine. **Materials and Methods:** This is a cross-sectional study. The universe of the research consisted of all individuals over the age of 18 living in Konya. The sample group consisted of 528 volunteers, which could be reached by random sampling method. In the collection of data, Personal Information Form, Scale for Evaluation of Perceptions and Attitudes towards the COVID-19 Epidemic and Attitudes towards the COVID-19 Vaccine Scales were delivered to individuals in online survey format via social media and e-mail. **Results:** It was observed that the individuals participating in the study mostly preferred the media for vaccine information. It was observed that there was a positive attitude towards the COVID-19 vaccine in the attitudes scale sub-dimensions of age and income variables. It was determined that there was a significant difference between vaccination information and COVID-19 vaccination status and some sub-factors of the scale. When the perceptions and attitudes of individuals over the age of 18 living in Konya were examined, it was determined that the general (illness) perception, the perception of control towards the disease, and the perception of the factors causing the disease were high.**Conclusion:** It was determined that although they thought that they could get rid of the COVID-19 epidemic with a vaccine or be protected, they were hesitant to trust the vaccines developed.

Keywords: Vaccines, infectious diseases, coronavirus, public health nursing, pandemic

ÖZET

Amaç: Bu araştırmanın amacı Konya ilinde yaşayan 18 yaş üstü bireylerin Koronavirüs ve COVID-19 aşısı hakkındaki algı ve tutumlarını belirlemektir. **Gereç ve Yöntem:** Bu araştırma kesitsel bir araştırmadır. Araştırmanın evreni Konya ilinde yaşayan 18 yaş üstü tüm bireyler oluşturdu. Gelişigüzel örnekleme yöntemi ile ulaşılabilen 528 gönüllü örneklem grubunu oluşturdu. Verilerin toplanmasında Kişisel Bilgi Formu, COVID-19 Salgınına Yönelik Algı ve Tutumları Değerlendirme Ölçeği ve COVİD-19 Aşısına Yönelik Tutumlar Ölçekleri çevrimiçi anket formatında sosyal medya ve e-posta aracılığıyla bireylere ulaştırıldı. **Bulgular:** Araştırmaya katılan bireylerin aşı bilgisi için en çok medyayı tercih ettikleri görüldü. Yaş ve gelir değişkenlerinin tutumlar ölçeği alt boyutlarında COVID-19 aşısına karşı olumlu tutum olduğu görüldü. Aşı bilgisi ve COVID-19 aşısı yaptırma durumları ile ölçeğin bazı alt faktörleri arasında önemli bir fark olduğu belirlendi. Konya ilinde yaşayan 18 yaş üstü bireylerin Koronavirüs hastalığına karşı olan algı ve tutumları incelendiğinde genel (hastalık) algısı, hastalığa yönelik kontrol algısı ve hastalığa neden olan faktörler algısının yüksek olduğu tespit edildi. **Sonuç:** Ayrıca COVID-19 salgınından bir aşı ile kurtulabileceklerini veya korunabileceklerini düşünmelerine rağmen geliştirilen aşılara güven konusunda tereddüt yaşamakta oldukları belirlendi.

Anahtar Kelimeler: Aşılar, bulaşıcı hastalıklar, koronavirüs, halk sağlığı hemşireliği, pandemi

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INTRODUCTION

Infectious diseases have been of great importance throughout human history and have led to the death of millions of people. These epidemics have negatively affected states in many areas such as health, development and education (Guen vd., 2020). The severity of the epidemic could not be understood, since the COVID-19 pandemic, which is one of these epidemic types, remained within the borders of China in the early days. However, with its rapid spread to other countries in a short time, the normal way of life has changed and the lives of millions of people have been affected at once (Gulcicek, 2021). According to World Health Organization (WHO) data, many people have died due to this virus (Sağlık Bakanlığı, 2021).

In today's conditions of 2021, the fight against COVID-19 continues at full speed around the world. Countries continue to look for ways to deal with the problems brought by the disease. In this context, the pandemic has been tried to be kept under control with various restrictions such as maintaining social distance, applying quarantine to visitors returning from abroad, temporarily closing schools or entertainment venues, conducting suitable works remotely, limiting traditional rituals (Gunduz, 2020). While the restrictions brought socioeconomic burdens to the society, the workload in the health systems increased with the increase in the cases. Since the restrictions were not sufficient to control the pandemic, vaccines were needed to ensure herd immunity (Yavuz, 2020). Vaccination has been a safe, effective and inexpensive method of preventing life-threatening infectious diseases at all ages. It is stated that the main purpose of vaccination is to “prevent communicable diseases from resulting in death or permanent disability” (WHO, 2021). Vaccine development studies have been carried out all over the world for coronavirus, which is one of the preventable infectious diseases. It has been heard that vaccines produced and offered for clinical use in a short time have been obtained (Sağlık Bakanlığı, 2021). However, the discovery of vaccines doesn’t mean that the problem will be completely eliminated. The reason for this becomes clear after a review of recent questions about vaccinations. It is seen that the idea of anti-vaccination started with the start of vaccinations. Anti-vaccine and vaccine indecision that has been used in this context; includes doubts about vaccination or delaying or refusing vaccination despite the availability of vaccination services (Aker, 2018). This situation is worrisome because of its potential to cause outbreaks of vaccine-preventable diseases and threatening public health (Erkekoglu vd., 2020). Today, as well as those who count the days to be vaccinated during the COVID-19 pandemic, there are still those who refuse the vaccine and are undecided on this issue. When the literature is examined, it is possible to see that there are many reasons for vaccine rejection or indecision. These reasons, which express reluctance to the vaccine in question, vary according to the personal characteristics of the individuals. Many factors such as the country or city where you live, the education level of the individuals, the explanations of the individuals who are active in the society, the general judgments of the society, religious factors, the approach of the health personnel to vaccination are the factors that affect this decision (Yavuz, 2020; Yuksel, & Yavuzoglu, 2019). In line with the information, it is thought that this research will contribute to the literature. The research was conducted to determine the perceptions and attitudes of individuals over the age of 18 about the coronavirus and COVID-19 vaccine.

Research Questions

In the research; "What are the perceptions and attitudes of individuals over the age of 18 living in Konya about COVID-19?", "What is the vaccination rate of the participants at the time of the research?", "Which demographic characteristics change their perspectives towards getting vaccinated?" answers to the questions were sought.

MATERIAL AND METODS

Type, Population and Sample of the Study

The research is a cross-sectional type of research, which is one of the descriptive research types. The population of the study consisted of individuals over the age of 18 living in Konya. In this study with a large population size, all individuals that could be reached by random sampling method were determined as the sample size of the study. The sample group consisted of 528 people who could be reached online and agreed to participate in the research. Dependent variables in the research; perceptions and attitudes of individuals towards the coronavirus epidemic and COVID-19 vaccine, independent variables; demographic data of individuals, their status of having COVID-19, the presence of chronic diseases, and methods or tools to access information about COVID-19.

Collection of Research Data

Research data were collected using the Personal Information Form, the Scale of Perceptions and Attitudes Towards the COVID-19 Epidemic, and the Attitudes Towards the COVID-19 Vaccine Scale between April and May 2021. The participants were asked to fill in the data collection tools after obtaining their consent with the voluntary participation form created through the online questionnaire. It took an average of 10 minutes to fill out the data collection tools.

Personal information form: Personal information form prepared by the researcher using the literature (Demir Uslu vd., 2021; Ertas vd., 2021; Altin, 2020; Erkekoglu, 2020); It consists of a total of 13 closed-ended questions, which include questions about the demographic characteristics of individuals, the status of having COVID-19, the presence of chronic diseases, the methods of accessing information about COVID-19, and the status of being vaccinated against COVID-19.

Perceptions and attitudes towards COVID-19 pandemic questionnaire: In this scale; In addition to the sub-dimensions that evaluate the general perception of the disease, the causes of the disease and the perception of control, there are sub-dimensions that include avoidance behaviors. Each of the sub-dimensions is evaluated independently and separate scores are obtained. A value between 1-5 is obtained by dividing the total score obtained by summing the item scores in the scale sub-dimension by the number of items in that sub-dimension. High scores for all sub-dimensions indicate high belief in that area (Artan, Karaman, & Cebeci, 2020). Cronbach's alpha value for internal consistency was determined as .797.

Perception and attitude scales related with COVID-19 pandemia: Consisting of nine items, this scale has two sub-dimensions as positive and negative attitudes. The statements in the scale are evaluated as "Strongly disagree (1)", "Disagree (2)", "Undecided (3)", "Agree (4)", "Strongly agree (5)". Items in the negative attitude sub-dimensions are scored inversely. A value between 1-5 is obtained by dividing the total score obtained by summing the item scores

in the scale sub-dimension by the number of items in that sub-dimension. High scores obtained from the positive attitude sub-dimension indicate that the attitude towards the vaccine is positive. It is calculated after the items in the negative attitude sub-dimension are reversed, and the high scores in this sub-dimension indicate that the negative attitude towards the vaccine is less (Genis vd., 2020). The Cronbach's alpha value for internal consistency was determined to be 0.862.

Inclusion and Exclusion Criteria

All individuals who are at least 18 years old, whose perception level has not decreased for any reason, and who do not have mental health problems were included in this study. Individuals who do not speak Turkish, who have difficulties in using social networks, who receive treatment at a level that may affect their perception, or who are very old were excluded from the study.

Analysis

IBM SPSS Statistics 20.0 program was used to evaluate the data obtained from the research. Kolmogorov-Smirnov distribution test was used to examine the normal distribution in statistical analyses. T-test, ANOVA, Mann Whitney U, Kruskal-Wallis tests, percentile, mean and standard deviation values were used according to whether the variable values were parametric or not.

RESULTS

Research findings are the findings of 528 participants aged over 18 years living in Konya. Considering the socio-demographic characteristics of the participants, 73.1% were women, 55.5% were between the ages of 18-24, 0.8% were illiterate, 64.2% were single, 11.2% were It was seen that the students graduated from primary school, 60.3% from university or higher schools. Looking at the income level, it was determined that 53% of them had an income equal to their expenses, 17% had lens than their expenses, and 84.1% had a health insurance. Considering the characteristics of the participants regarding the coronavirus disease; Of the participants, 76% of whom did not have COVID-19, 83.9% did not have any chronic diseases, 99.6% of the participants were asked to tick more than one option to identify the source of information for the disease, the source of information was the media, followed by 22.7% It was seen that 's took into account what they heard from their friends. At the time the research data were collected, 18.4% of the participants had COVID-19 vaccine for now, 42.6% were positive about getting COVID-19 vaccine, 21.4% were undecided for now, 58.5% It was determined that he thought that he had partial knowledge about this disease (Table 1).

Table 1: Socio-demographic characteristics of the participants

Demographic Variables		n	%	Demographic Variables		n	%
Age	18-24	293	55.5	**Income**	Income more	154	29.2
	25-44	69	32.0		Income equals	280	53.0
	45-59	45	8.5		Income less	94	17.8
	60 years and older	21	4.0				
Gender	Female	386	73.1	**Chronic**	No	443	83.9
	Male	142	26.9	**Disease**	Hypertension	22	4.2
					Diabetes	14	2.7
					COPD	5	0.9
					Other	62	11.7

Table 1 (Continue). Socio-demographic characteristics of the participants

Educational Status	Illiterate	4	0.8	**Information Source**	Media	526	99.6
	Primary Education	59	11.2		Health workers	5	0.9
	High school	146	27.7		Academic Resources	11	2.1
	> University	319	60.3		Friends	120	22.7
Location	Province	442	83.7	**Vaccine information**	Yes	170	32.2
	District	86	16.3		Partly	309	58.5
					No	49	9.3
Marital status	Married	189	35.8	**COVID-19 Vaccine**	I had it	97	18.4
	Single	339	64.2		I won't	93	17.6
					Indecisive	113	21.4
					I will	225	42.6
Family Type	Extended family	74	14.0	**COVID-19 Status**	Yes	124	23.5
	Nuclear family	445	84.3		No	404	76.5
	Split family	9	1.7				
Social Security	Yes	444	84.1				
	No	84	15.9				

According to the data obtained by comparing the sub-factors of the assessment scale of perceptions and attitudes towards the COVID-19 epidemic according to some variables; When the age groups were examined in terms of general perception, it was seen that the scale sub-scores of the participants aged 18-24 were 3.94±0.7, higher than the other age groups, and there was no statistical significance ($p>0.05$). It was observed that values close to this mean were observed in other age groups. It was determined that 60 years and older had the highest values with the mean of 3.81± 0.65 according to the reasons perception sub-factor, and 3.60±0.53 according to the perception of control sub-factor, and these values were statistically significant ($p<0.05$). It was determined that there was no significant difference between the age groups according to the avoidance behavior sub-factor ($p>0.05$). Considering the general perception sub-dimension of women and men, it was seen that the general perception score of female participants was 3.99±0.67 higher than that of male participants. It was determined that male participants had low perception of illness and there was a statistically significant difference between these two groups ($p<0.05$). When the other sub-dimensions of the scale were evaluated according to gender, there was no significant difference ($p>0.05$). When the educational status of the participants is examined, the mean of the illness perception of university graduates in the general perception sub-dimension is 4.01±.064, the mean of the illiterate in the perception of reasons sub-dimension is 3.83±0.78, and in the control perception sub-dimension, the mean of the primary school graduates is 3.31±0. It was determined that they had the highest averages with an average of .69 and that these averages had a significant difference ($p<0.05$). In addition, it was determined that there was no significant difference in terms of avoidance behavior sub-score ($p>0.05$). When the belief levels about the COVID-19 disease were evaluated according to the family structures of the participants, it was observed that the individuals with the split family type had the highest perception with a mean of 4.01±0.75 ($p<0.05$). In terms of income level, it was observed that individuals with high income levels in the sub-dimensions of perception of control and perception of avoidance had higher beliefs about being able to control the disease (2.91±.059) or avoiding the disease (3.27±0.63) ($p<0 .05$), (Table 2).

Table 2. Comparison of the sub-dimensions of the scale of perceptions and attitudes towards the covıd-19 outbreak according to some variables

	Scale Sub-Dimensions							
Variables	**General Perception**		**Perception of Causes**		**Perception Control**		**Avoidance Behaviors**	
	Min-Max	**$\bar{X}$±SD**	**Min-Max**	**$\bar{X}$±SD**	**Min-Max**	**$\bar{X}$±SD**	**Min-Max**	**$\bar{X}$±SD**
Age								
18-24	1.50-5.00	3.94±0.71	1.06-4.89	2.79±0.66	1.00-4.54	2.83±0.63	1.00-4.93	3.18-0.73
25-45	1.88-5.00	3.92±0.64	1.00-4.94	2.66±0.75	1.00-5.00	2.79±0.71	1.00-5.00	3.06±0.77
46-59	2.38-4.83	3.91±0.69	1.33-4.56	2.96±0.64	1.62-4.38	3.06±0.59	1.14-4.29	3.02±0.72
> 59	2.38-4.75	3.85±0.70	2.56-4.83	3.81±0.65	2.69-4.54	3.60±0.53	2.29-4.21	3.31±0.45
(p / F)	0.854 / 0.780		**0.000 / 39.020**		**0.000 / 29.824**		0.251 / 4.105	
Gender								
Female	1.5-5.0	3.99±0.67	1.0-4.94	2.82±0.72	1.0-5.0	2.85±0.68	1.0-5.0	3.12±0.74
Male	1.5-4.88	3.75±0.71	1.28-4.89	2.80±0.73	1.38-4.54	2.87±0.67	1.0-5.0	3.16±0.71
(p / F)	**0.001 / 12.245**		0.394 / 0.729		0.261 / 1.268		0.537 / 0.382	
Education								
Illiterate	2.5-4.5	3.93±0.96	2.67-4.28	3.83±0.78	3.0-3.77	3.26±0.34	2.93-3.86	3.37±0.38
Primary school	1.88-4.75	3.65±0.72	1.78-4.94	3.26±0.78	1.62-5.0	3.31±0.69	1.86-5.0	3.23±0.61
High school	1.5-5.0	3.86±0.72	1.06-4.56	2.79±0.68	1.0-4.54	2.86±0.66	1.0-5.0	3.13±0.77
>University	1.88-5.0	4.01±0.64	1.0-4.89	2.80±0.73	1.0-4.62	2.79±0.64	1.0-4.93	3.11±0.74
(p / F)	**0.003 / 14.008**		**0.000 / 28.181**		**0.000 / 28.767**		0.517 / 2.277	
Family								
Extended family	2.50-5.00	3.78±0.61	1.44-4.39	2.93±0.68	1.23-4.54	2.96±0.68	1.00-4.36	3.05±0.65
Nuclear family	1.50-5.00	3.95±0.69	1.00-4.94	2.78±0.73	1.00-5.00	2.86±0.67	1.00-5.00	3.15±0.74
Other	3.00-5.00	4.01±0.75	1.28-3.67	2.77±0.82	1.00-3.31	2.51±0.67	1.93-4.86	3.13±1.15
(p / F)	0.042 / 6.343		0.240 / 2.853		0.204 / 3.183		0.622 / 0.951	
Income								
Income more	1.50-5.00	3.85±0.74	1.0- 4.78	2.73±0.68	1.54-4.62	2.91±0.59	1.36-4.93	3.27±0.63
Income equals	1.50-5.00	3.98±0.65	1.17-4.83	2.81±0.07	1.23-5.00	2.90±0.66	1.00-5.00	3.09±0.74
Income less	2.50-5.00	3.89±0.67	1.00-4.94	2.90±0.77	1.00-4.54	2.71±0.79	1.07-5.00	3.03±0.83
(p / F)	0.120 / 2.128		0.212 / 1.556		**0.043 / 3.171**		**0.014 / 4.274**	

Independent groups t-test was used for analysis

When the sub-dimensions of the assessment scale of perceptions and attitudes towards the COVID-19 epidemic were compared according to the coronavirus variables, it was seen that individuals who received information about the coronavirus from their friends without a scientific basis had a higher mean perception of reasons and perception of control againstvaccines, and this was a significant difference ($p<0.05$). In addition, it was determined that the group with the highest general perception average was the individuals who received information from scientific sources. When evaluated according to their knowledge about vaccines, it was seen that the general perception average of the individuals who thought they had enough knowledge about vaccines had the highest average with 4.05±0.66, and the lowest average with the average of the reason perception with the average of 2.71±0.73 ($p<0.05$). When compared according to the thought or situation of getting the COVID-19 vaccine, it was

determined that the individuals who had the vaccine had the highest general perception mean of 4.24±0.53 and the highest control perception mean of 2.97±0.64 ($p<0.05$), (Table 3).

Table 3. Comparison of the sub-dimensions of the scale of perceptions and attitudes towards the covıd-19 outbreak according to the coronavirus variables

	Scale Sub-Dimensions							
Variables	**General Perception**		**Perception of Causes**		**Perception of Control**		**Avoidance Behaviors**	
	Min-Max	**$\bar{X}$±SD**	**Min-Max**	**$\bar{X}$±SD**	**Min-Max**	**$\bar{X}$±SD**	**Min-Max**	**$\bar{X}$±SD**
Media								
Yes	1.5-5.0	3.92±0.68	1.0-4.94	2.80±0.73	1.0-5.0	2.87±0.67	1.0-5.0	3.13±0.73
No	3.63-4.75	4.18±0.79	1.78-2.89	2.33±0.78	3.08-3.77	3.42±0.48	2.29-3.00	2.64±0.50
(p / F)	0.597 / 0.280		0.362 / 0.831		0.251 / 1.322		0.344 / 0.899	
Health workers								
Yes	3.50-5.00	4.37±0.55	1.78-3.00	2.62±0.48	1.00-2.85	2.23±0.76	2.57-4.86	3.62± 1.11
No	1.50-5.00	3.92±0.68	1.00-4.94	2.80±0.73	1.00-5.00	2.88±0.67	1.00-5.00	3.13±0.73
(p / Z)	0.133 /-1.504		0.651 /-0.452		0.059 /-1.888		0.519 /-0.645	
Academic resources								
Yes	3.50-4.75	4.27±0.37	1.00-3.17	2.19±0.64	2.23-4.00	3.04±0.52	2.14-4.93	3.00±0.82
No	1.50-5.00	3.92±0.69	1.06-4.64	2.81±0.73	1.00-5.00	2.87±0.67	1.00-5.00	3.10±0.73
(p / Z)	0.107 /-1.612		0.008 /-2.652		0.438 /-0.775		0.245 /-1.163	
Friends								
Yes	2.38-5.00	3.95±0.62	1.50-4.94	3.06±0.77	1.23-4.54	2.98±0.74	1.07-4.86	3.048±0.69
No	1.50-5.00	3.92±0.70	1.00-4.89	2.73±0.70	1.00-5.00	2.84±0.65	1.00-5.00	3.16±0.74
(p / F)	0.648 /0.209		**0.000 / 19.312**		**0.042 / 4.160**		0.135 /2.241	
Vaccine Information								
Yes	1.50-5.00	4.05±0.66	1.00-4.94	2.71±0.73	1.00-4.62	2.93±0.69	1.14-5.00	3.23±0.79
Partly	1.75-5.00	3.91±0.64	1.06-4.83	2.81±0.73	1.00-5.00	2.86±0.63	1.00-4.86	3.08±0.69
No	1.50-4.88	3.61±0.88	1.78-4.89	3.05±0.66	1.00-4.81	2.74±0.80	1.14-5.00	3.12±0.80
(p / F)	**0.000 / 7.959**		**0.019 / 3.997**		0.194 / 1.645		0.089 / 2.430	
Covid-19 vaccination status								
I had it	2.88-5.00	4.24±0.53	1.00-4.78	2.77±0.80	1.54-4.54	2.97±0.64	1.14-4.86	2.99±0.75
I won't	1.50-5.00	3.64±0.75	1.22-4.39	2.92±0.67	1.00-4.54	2.77±0.75	1.00-4.79	3.08±0.76
Indecisive	1.50-5.00	3.69±0.75	1.50-5.00	2.83±0.73	1.00-4.31	2.76±0.69	1.00-5.00	3.12±0.70
I will	2.38-5.00	4.02±0.59	1.06-4.94	2.75±0.72	1.46-5.00	2.92±0.63	1.07-5.00	3.22±0.73
(p / F)	**0.000 / 19.736**		0.310 / 1.198		**0.037 / 2.847**		0.057 / 2.521	

Independent groups t-test and Kruskal Wallis tests were used for analysis

According to the scale of attitudes towards the COVID-19 vaccine, the attitudes of the participants towards the vaccine were evaluated. According to the results of the evaluation, individuals with a high positive attitude towards the vaccine and a significant difference between their averages are over 60 years old (4.45±.69), married (3.89±1.27), male (3.91±0.99), living in a nuclear family. (3.76±1.18) and individuals whose income was higher than their expenses (3.90±1.11) ($p<0.05$). In addition, although there was no significant difference between them, it was determined that the attitudes of the participants with a university or higher education towards COVID-19 vaccines were positive ($p>0.05$). In terms of negative attitudes, it was determined that there was a significant difference between the averages of individuals whose income was equal to their expenses ($p<0.05$), (Table 4).

Table 4. Comparison of attitudes towards COVID-19 vaccine scale sub-factors according to some variables

Variables		Scale Sub-Dimensions			
		Positive Attitude		Negative Attitude	
		Min-Max	Mean±SD	Min-Max	Mean±SD
Age	18-24 years	1.00-5.00	3.60±1.14	1.00-5.00	3.36±0.86
	25-45 years	1.00-5.00	3.69±1.70	1.00-5.00	3.41±0.93
	46-59 years	1.00-5.00	4.03±1.21	1.50-5.00	3.54±0.92
	60 years and older	2.75-5.00	4.45±0.69	1.00-5.00	3.05±1.03
	Significance	**0.001 / 16.514**		0.364 / 3.182	
Gender	Female	1.0-5.0	3.63±1.27	1.0-5.0	3.38±0.90
	Male	1.0-5.0	3.91±0.99	1.0-5.0	3.35±0.89
	Significance	**0.018 / 5.612**		0.786 / 0.074	
Education	Illiterate	1.75-5.0	3.75±1.42	2.20-4.0	3.15±0.75
	Primary Education Graduate	1.0-5.0	3.72±1.29	1.0-5.0	3.21±1.02
	High school graduate	1.0-5.0	3.53±1.22	1.0-5.0	3.27±0.85
	University and above	1.0-5.0	3.78±1.19	1.0-5.0	3.45±0.89
	Significance	0.208 / 4.552		0.087 / 6.560	
Marital status	Married	1.00-5.00	3.89±1.27	1.00-5.00	3.42±0.95
	Single	1.00-5.00	3.59±1.16	1.00-5.00	3.34±0.86
	Significance	**0.006 / 7.529**		0.336 / 0.926	
Family	Extended family	1.00-5.00	3.42±1.30	1.40-5.00	3.34±0.89
	Nuclear family	1.00-5.00	3.76±1.18	1.00-5.00	3.38±0.90
	Other	1.00-4.75	2.97±1.31	1.80-4.60	3.33±0.90
	Significance	**0.021 / 7.751**		0.941 / 0.122	
Income	Income more than expenses	1.00- 5.00	3.90±1.11	1.00-5.00	3.39±0.89
	Income equals expense	1.00-5.00	3.74±1.20	1.00-5.00	3.45±0.87
	Income less than expenses	1.00-5.00	3.27±1.30	1.00-5.00	3.11±0.92
	Significance	**0.000 / 8.445**		**0.007 / 4.950**	

Independent groups t-test was used for analysis

When the sub-dimensions of the scale of attitudes towards the COVID-19 vaccine are compared with the variables regarding where the information about the coronavirus is obtained; It was observed that the average of positive attitudes towards vaccines of individuals who received information from academic sources was higher with 4.43±0.89 ($p<0.05$). It was determined that the group with the lowest average of positive attitudes was 2.95±1.48, whose source of information was health personnel. Although there was no significant difference, this was a very striking result ($p>0.05$). When compared according to the perceived level of knowledge about vaccines, it was determined that the positive attitude of the individuals who thought that the level of knowledge was sufficient was higher. When the Covid-19 vaccination status was evaluated, it was determined that the individuals with the lowest positive attitude towards vaccines were those who did not think about getting vaccinated. There were significant differences between the groups ($p<0.05$, Table 5)

Table 5. Comparison of sub-dimensions of the scale of attitudes towards covıd-19 vaccine according to coronavirus variables

		Scale Sub-Dimensions			
		Positive Attitude		Negative Attitude	
Variables		**Min-Max**	**$\bar{X}$±SD**	**Min-Max**	**$\bar{X}$±SD**
Information Source Media	Yes	1.00-5.00	3.70±1.20	1.00-5.00	3.37±0.89
	No	1.00-5.00	3.00±2.82	1.40-4.40	2.90±2.12
	Significance (P / F)	0.410 / 0.679		0.456 / 0.556	
Information Source Healthcare workers	Yes	1.00-5.00	2.95±1.48	1.80-3.80	2.68±0.72
	No	1.00-5.00	3.71±1.21	1.00-5.00	3.38±0.89
	Significance (P / Z)	0.234 /-1.191		0.057 /-1.905	
Information Source Academic	Yes	2.75-5.00	4.43±0.89	3.40-5.00	4.10±0.56
	No	1.00-5.00	3.69±1.21	1.00-5.00	3.35±0.89
	Significance (P / Z)	**0.021 /-2.303**		**0.004 /-2.910**	
Information Source Friends	Yes	1.00-5.00	3.68±1.27	1.00-5.00	3.31±0.91
	No	1.00-5.00	3.71±3.68	1.00-5.00	3.39±0.89
	Significance (P / F)	0.829 / 0.046		0.416 / 0.664	
Vaccine Information	Yes	1.00-5.00	3.97±1.27	1.00-5.00	3.52±1.01
	Partly	1.00-5.00	3.65±1.16	1.00-5.00	3.37±0.79
	No	1.00-5.00	3.14±1.11	1.00-5.00	2.83±0.90
	Significance (P / F)	**0.000 / 9.953**		**0.000 / 11.668**	
COVID-19 vaccination status	I had it	1.00-5.00	4.36±0.79	1.00-5.00	3.59±0.88
	I won't	1.00-5.00	2.24±1.04	1.00-5.00	2.80±0.96
	Indecisive	1.00-5.00	2.91±0.75	1.00-4.80	3.01±0.63
	I will	1.50-5.00	4.42±0.75	1.00-5.00	3.69±0.81
	Significance (P / F)	**0.000 / 211.141**		**0.000 / 36.353**	

Independent groups t-test and Kruskal Wallis tests were used for analysis

DISCUSSION

With the COVID-19 disease, which was declared a pandemic by the World Health Organization, academic studies have begun to be carried out in many fields and these studies are still continuing (Altin, 2020). It is known that the perception and attitude of the society in such epidemics has an important place in the process of controlling the epidemic (Ertas vd., 2021). In this study, it was aimed to determine the perceptions and attitudes of individuals over the age of 18 living in Konya against the COVID-19 disease and the vaccines developed for this disease.

At the time of the study, it was determined that approximately 23% of the volunteers participating in the study had COVID-19 disease, and 17% did not consider getting vaccinated to prevent this disease. When it was questioned how individuals evaluated their level of knowledge about the disease, it was found that 32.2% thought they had enough information, and 99.6% mostly used social media while obtaining information about this disease, and 22.7% used the information they received from their friends (Table 1). In the study conducted by Doğan and Düzel (2020), whose data were collected one year before this study, 14.5% of the participants did not consider getting vaccinated, and in the study conducted by Ertaş et al.

(2021), the participants' news and developments regarding the COVID-19 epidemic were mostly obtained from the internet and on the internet. It is stated that they follow on social media. In the study of Murphy vd. (2021) in the United Kingdom and Ireland, it was stated that the level of injury of the population from traditional and authoritative sources to obtain information on vaccination is low. In this research, the fact that the society receives information about vaccines mostly from social media brings to mind the problem of trust in other resources as well as social media addiction in the society. The results of other sources of information on vaccines are similar to those in the literature.

When the perception and attitudes of the individuals in the society about the COVID-19 disease are evaluated according to their demographic variables, it is seen that the attitude of accepting the disease and the positive attitude towards the vaccine increase as the age increases. In other words, it has been observed that individuals over the age of 60 exhibit more positive attitudes towards COVID-19 vaccines than individuals aged 18-24. In the study by Lazarus et al. (2021), it is stated that people aged 25-54, 55-64 and 65+ are more likely to accept the vaccine than people aged 18-24. In the study conducted by Kesgin and Durak (2021) across Turkey, it was mentioned that there is no big difference according to age groups in terms of protection measures. However, in this study, it was observed that the group with the highest perception of control towards the disease was individuals aged 60 and over, and this result was a significant difference ($p<0.05$). It is thought that this difference between studies may be due to cultural differences between regions. In this period, it is seen that the acceptance of elderly people in the risk group in terms of the disease and the higher mortality rates affect the positive perspective of elderly individuals towards vaccines in a positive way.

In the study, when the perception of illness according to education level was examined, it was seen that as the education level increased, the belief in illness, the belief in the perception of causes and the perception of control increased. In addition, as the education level of the participants increased, it was observed that the level of positive attitude towards the vaccine increased. However, the interesting thing in this study was that the attitudes of the group with the lowest education level were also high. When the literature was examined, it was stated in a study that participants with higher education levels were less affected by COVID-19 (Ertas vd., 2021). In the study of Troiano and Nardi (2021), it was stated that higher education level seems to be a protective factor against vaccine rejection. The results of the studies show parallelism with the findings of this study. As the level of education increases, the level of access to the right information sources will increase, it is seen that the level of perception of the disease increases and the initiatives to take precautions accordingly are moving in the right direction. The high level in the group with low education level can be interpreted as the lack of self-confidence in health information may cause them to be open to being directed.

In comparisons made according to other demographic characteristics, it was determined that male participants, those with a split family structure and high income levels had higher perceptions of the disease and attitudes towards the COVID-19 vaccine, and married individuals had a positive attitude towards vaccines. In the study of Atar vd. (2020), it was stated that in the COVID-19 knowledge levels of the participants, married people have a positive attitude towards COVID-19 compared to singles. In the study of Salali vd. (2020), men

in Turkey were more likely to accept the COVID-19 vaccine when their attitudes towards vaccination were compared with women. The reason why positive attitudes are higher in men can be shown as the reason why men spend more time in public areas than women. In addition, it is thought that with the spread of rumors on social media that vaccines cause infertility, women may also have pregnancy concerns and these concerns may adversely affect the attitude towards vaccines.

When the participants were asked from where they got information about the COVID-19 vaccine, it was observed that the group with a high positive attitude obtained information from academic sources, while it was very interesting to see that the group with the highest negative attitude received the information from healthcare professionals ($p<0.05$). In a study conducted by Demir Uslu et al. with university students, it was stated that students who took health education courses had higher attitudes towards vaccines. In another study, it was stated that community education should be increased in order to ensure compliance with the policies developed on immunization (Uzum vd., 2019). It can be thought that these results are due to the increasing social media addictions in the society and the ease of accessing the information shared in the media rather than reading academic articles.

Among the questions examined in this study, "What are the perceptions and attitudes of individuals over the age of 18 living in Konya about COVID-19?", "What is the vaccination rate of the participants at the time of the research?", "Which demographic characteristics change their perspectives against getting vaccinated?" The answers to the research questions in the form of.

CONCLUSION

At the end of the research, the perceptions and attitudes of individuals over the age of 18 about COVID-19 vary according to demographic characteristics, as the average age increases, the perception against the disease and the attitudes towards the vaccine also increases, and the people, male, married, high-income, lowest and highest-educated, are against vaccines. Attitudes were found to be significantly higher.

When the perceptions and attitudes of individuals towards the coronavirus disease were examined according to the sub-factors, it was observed that the general disease perception and the perception of the factors causing the disease were also significantly higher in the individuals who perceived that their knowledge of the vaccine was high.

It was observed that the misinformation that individuals acquired about COVID-19 vaccines negatively affected their attitudes towards vaccines. It was determined that those who received information from academic sources had a significantly higher positive attitude towards vaccines, while individuals who received information from healthcare professionals had the lowest positive attitudes. It was observed that the positive attitudes of the individuals who had received their vaccinations until the date of the study were higher.

In line with the results obtained, it has been determined that there is a serious information confusion in the society, and that they go to the wrong channels to reach information sources. In addition to the in-service trainings on vaccines, especially for healthcare professionals, public service announcements, posters and trainings should be planned to explain the effects and benefits of the vaccine, and the information pollution in the social media. It is

thought that the guides developed by the health ministries of the countries should be spread more on social media, which can be accessed more easily by the society. It is recommended that future research should conduct interventional studies that examine the changes seen after the training of healthcare professionals and the public on vaccines.

Ethical Declaration

Approval was obtained from the Ethics Committee of KTO Karatay University Faculty of Medicine for Non-Pharmaceutical and Medical Device Research (Decision number: 2021/044) to carry out this study. Permission to use the scales was obtained from the researchers who conducted the validity and reliability studies for the Scale of Perceptions and Attitudes towards the COVID-19 Outbreak and the Attitudes towards the COVID-19 Vaccine Scale. Informed consent was obtained from the participants and they were allowed to participate in the study on a voluntary basis. The methods in line with the Declaration of Helsinki were followed throughout the entire study.

Limitations of the Research

While the data of this research was being collected, restrictions were continuing due to the COVID-19 pandemic. For this reason, online communication with individuals caused difficulties in answering questions. In addition, vaccination studies were started in this process, and some of the people who answered the questions were at the beginning of the process, while some of them coincided with the later stages of the vaccination process. These situations formed the limitations of the study.

Declarations of Interest Statement

No potential conflict of interest was reported by the author.

REFERENCES

Aker, A. A. (2018). Vaccine refusal. Community and Physician Archive, 33 (3), 175-186. Available at: https://www.belgelik.dr.tr/ToplumHekim/kayit_goster.php?Id=2840#

Altin, Z. (2020). Elderly people in COVID-19 outbreak. Journal of Tepecik Education and Research Hospital, 30, 49-57. https://doi.org/10.5222/terh.2020.93723

Artan, T., Karaman, M., & Cebeci, F. (2020). The scale of evaluation of perceptions and attitudes towards the COVID-19 outbreak evaluation. Turkish Journal of Social Work, 4(2), 101-107. https://dergipark.org.tr/tr/download/article-file/1376965

Demir Uslu, Y., Yılmaz, E., & Altun, U. (2021). Evaluation of health management and human resources management students' perceptions and attitudes towards the control and vaccine of COVID-19. Gümüşhane University Journal of Health Sciences, 10(3), 383-397. https://dergipark.org.tr/en/download/article-file/1680057

Dogan, M. M., & Duzel, B. (2020). Fear-anxiety levels in COVID-19. Turkish Studies, 15(4), 739752. https://turkishstudies.net/turkishstudies?mod=tammetin&makaleadi=&makaleurl=2dbf0897-56b4-406c-aa44-4acc047da3bc.pdf&key=44678

Erkekoglu, P., Erdemli Kose, S.B., Balci, A., & Yirun, A. (2020). Vaccine hesitancy and effects of COVID-19. Journal of Literature Pharmaceutical Sciences, 9(2), 208-220. https://www.turkiyeklinikleri.com/article/tr-asi-kararsizligi-ve-COVID-19un-etkileri-88601.html

Ertas, A., Kağan, G., Akçi, Y. & Zelka, M. (2021). Knowledge, attitude and practices of Turkish society about COVID-19. Ekev Academy Journal, 86, 1-20. https://doi.org/10.17753/Ekev1851

Genis, B., Gurhan, N., Koc M, Genis, Ç., Sirin, B., Cirakoglu, O. C., & Cosar, B. (2020). Development of perception and attitude scales related with COVID-19 pandemia. Social Sciences Humanities, 5(7), 306-328. https://www.pearsonjournal.com/Makaleler/286789466_306-326.pdf

Guan, W. J, Ni, Z. Y., Hu, Y., Liang, W. H., Ou, C. Q., He, J. X., et al. (2020). Clinical characteristics of coronavirus disease 2019 in China. New England Journal of Medicine 382, 1708-1720. https://www.nejm.org/doi/10.1056/NEJMoa2002032#article_citing_articles

Gulcicek, C. (2021). The Effects of The Coronavirus Epidemic on Global Security and Management. Master's Thesis, Bahçeşehir University Graduate Education Institute, İstanbul.

Gunduz, F. (2020). Turkey's exam with the new coronavirus desiese (COVID-19) epidemic: Studies of building a safe future and public perceptions. International Journal of Euroasian Research, 8(23), 447-467.

Kesgin, S. S., & Durak, M. B. (2021). Pandemic and demography: The perceptions and attitudes towards COVID-19 pandemic by age groups. Journal of Social Change, 3(1),6-23. https://doi.org/10.51448/tde.2021.1

Lazarus, J. V., Ratzan, S. C., Palayew, A. Gostin, L. O., Larson, H. J., Rabin, K., et al. (2020). A global survey of potential acceptance of a COVID-19 vaccine. Nature Medicine, 27, 225–228. https://doi.org/10.1038/s41591-020-1124-9

Murphy, J., Vallières, F., Bentall, R. P., Shevlin, M., McBride, O., Hartman, T.K., et al. (2021). Psychological characteristics associated with COVID-19 vaccine hesitancy and resistance in Ireland and the United Kingdom. Nature Communications, 12(1), 1-15. doi: 10.1038/s41467-020-20226-9.

Ministry of Health (2021). COVID-19 vaccine information platform. Available at: https://COVID19.saglik.gov.tr.

Salali, G., & Uysal, M. (2020). COVID-19 vaccine hesitancy is associated with beliefs on the origin of the novel coronavirus in the UK and Turkey. Psychological Medicine, 19,1-3. https://doi.org/10.1017/s0033291720004067

Troiano, G., & Nardi, A. (2021). Vaccine hesitancy in the era COVID-19. Public Health, 194, 245-251. https://doi.org/10.1016/j.puhe.2021.02.025

Uzum, O., Eliacik, K., Orsdemir, H. H., Oncel., E. K. (2019). Factors affecting the immunization approaches of caregivers: An example of a teaching and research hospital. Journal of Pediatric Infection, 13(3), 144-149. doi:10.5578/ced.68398

World Health Organization. (2021). Health topics, vaccines and immunization. Available at: https://www.who.int/health-topics/vaccines-and-immunization#tab=tab_1.

Yavuz, E. (2020). Covid-19 vaccines. Turkish Journal of Family Practice, 24(4), 227-234. https://www.turkailehekderg.org/jvi.aspx?un=TAHD-88598&volume=24&issue=4

Yilmaz Atar, A., Urgan, S., & Erdoğan, P. (2020). The study of optimism-pessimism and life satisfaction in terms of demographic variables during the COVID-19 pandemic period. Pearson Journal of Social Scıences & Humanities, 7(7), 263-278.

Yuksel, G., & Topuzoglu, A. (2019). Factors affecting anti-vaccination, Estudam Journal of Public Health, 4(2), 244-258. https://doi.org/10.35232/estudamhsd.525983