HIGH SCHOOL STUDENTS' COVID-19 AWARENESS LEVELS ACCORDING TO PARTICIPATION IN PHYSICAL ACTIVITY

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ABSTRACT

This study aimed to investigate changes in high school students' physical activity levels during the COVID-19 pandemic restrictions. In this process, in which students had to stay away from school and social life, a large part of their daily work was interrupted. Students could not do physical activity as usual ant they spent more time in the digital environment such as television, computers, etc. and experienced deterioration in cardiovascular system besides problems such as irregular sleep. It was observed that individuals, especially the young, had difficulty in complying with or did not comply with the mask, distance and hygiene rules. Covid-19 Awareness Scale was used to collect data. With data from 204 students, construct and content validity of the scale was tested with SPSS and Amos programs. It was found that the Covid-19 awareness levels were higher in female students than male students, in students who were not engaged in sports than students who were, in students who were engaged in individual sports than students who were engaged in team sports. Therefore, it is very important for male students who are engaged in team sports to pay more attention to mask distance and hygiene rules.

Keywords: COVID-19, Physical Activity, Hygiene, Distance, Mask.

INTRODUCTION

After World Health Organization (WHO) declared Covid-19 a global epidemic in March 2020 and the first case of coronavirus was seen in Turkey, the Ministry of Health started a number of practices for the preparation and implementation of instructions in accordance with mask, distance and hygiene rules in order to prevent individuals from catching the Covid-19 virus, which was rapidly expanding its sphere of influence. One of the biggest health problems in past experiences is "pandemics". Pandemic means epidemic diseases that affect many parts of the world (Tüba, 2020). According to the World Health Organization, a disease must meet certain criteria in order to be considered a pandemic. These criteria are being a new virus, easily spreading to and being transmitted from people. Since coronavirus, which has recently affected the world, meets these criteria, it was declared as a pandemic by the World Health Organization. One of the biggest factors facilitating the spread of coronavirus is close contact. For this reason, social distancing is of great importance. Hygiene measures to be taken are as important as the social distance rule. Hygiene measures prevent the spread of pathogens and reduce the danger of the virus. Measures such as the use of gloves and masks, frequent hand washing, personal hygiene and the cleanness of the environment we live in are within the scope of hygiene measures (Pınar et al., 2020). As a result of researches, it is stated that especially students act flexible in mask, distance and hygiene rules and do not follow the rules. Many countries brought restrictions to outdoor activities. In Turkey, with the first case, strict measures were taken and implemented to control the virus, as in many countries. For this reason, these measures involving students in formal education helped to reduce the rate of infection and caused a sudden and radical change in the habits and lifestyles of the population (Yüce et al., 2021). Social distance and social isolation affected people's lifestyles, especially their daily physical activities. Due to social restrictions, staying at home, digital education, working from home, and limiting physical activity outdoors and in the gym limited participation in normal daily activities. Absence of guidance or intervention in students' inadequate participation in physical activity may cause negative effects on the health of individuals in their future lives (İlaslan et al., 2020).

Physical activity is the movements performed by skeletal muscles through spending energy. Repeated body movements that are planned and performed in a desired way by allocating special time in our lives are also called exercise. One of the primary causes of obesity, a current health problem in all countries of the world, which occurs as a result of the imbalance between the energy taken and the energy burned over a long period of time and which reduces the human lifespan and quality of life by being effective in the formation of many of today's diseases, is the lack of physical activity or lack of physical activity or doing very little physical activity. In our country, as in all countries of the world, the incidence of obesity is increasing, the onset age of obesity is decreasing, and its effects on human health are reaching serious dimensions (Sevindik, 2011). In order to create the foundation of a healthy society, the habit of physical activity should be taught to children from an early age. Researchers are very interested in supporting the development of a healthy lifestyle and conducting relevant studies on the determination of physical activity habits in young people. The amount of movement done and how movement is done during childhood and youth are also as important as doing movement in terms of the

usefulness of the activity. Moderate-intensity work-outs have been found to contribute positively to children in terms of growth (Karademir, 2017). As a result of the Covid-19 virus, which has become a serious health threat around the world, high school students studying at various education levels in our country could not leave their homes for a long time, and whether the physical activity needs of children, which are very important for their overall health, were met during this long period of time is not known. Therefore, the present study aimed to examine the Covid-19 awareness levels of high school students according to their level of participation in physical activity.

METHOD

Sample and Population

High school students attending formal education in Turkey constitute the population of the study in which convenience sampling method was used. With the Covid-19 awareness scale prepared in Google form for the sample group, necessary warnings were made and 204 high school students were reached via social media and e-mail. Participation was on a voluntary basis. 52.39% of the students were female, 47.1% were male, 68.1% were doing sports and 58.8% were elite athletes.

Data Collection Instrument

"Covid-19 Awareness Scale" (COAS) was used to determine the awareness of high school students about mask-distance-hygiene in the Covid-19 epidemic. Construct validity of the scale was examined with exploratory factor analysis (EFA). In order to determine the suitability of the data for factor analysis, Kaiser Meyer Olkin (KMO) sample adequacy coefficient and Barlett Sphericity test significance value should be calculated before EFA. A KMO value of >0.50 indicates that each variable in the scale will predict other variables (Field, 2013). 5-point Likert type Covid-19 Awareness Scale, developed by Büyükbeşe and Dikbaş in 2021, has 21 items and 3 sub-dimensions which were validated in three dimensions: hygiene (12 items), distance (6 items), and mask (3 items). For each question, there are options such as strongly disagree (1), partially disagree (2), undecided (3), partially agree (4) and strongly agree (5). Higher scores obtained from the COAS shows increased awareness of university students about COVID-19. The scale had an internal consistency coefficient of 0.90 (Büyükbeşe and Dikbaş, 2021).

Data Analysis

Normality assumption of the parameters measured in the study (mask, distance, hygiene) was analysed with Shapiro-Wilk test, while the assumption of homogeneity of variances was analysed with Levene's test (P>0.05). Differences of parameters according to BMI groups (weak-normal) were determined by Student's t-test, while differences according to groups in terms of age, the status of being an athlete, etc. were determined by (one-way Anova) and Tukey multiple comparison test. All findings were shown as n, mean and standard deviation, and p<0.05 was considered significant. SPSS 22.0 (SPSS Inc., Chicago, IL) statistical program was used for the statistical analysis of the results found in the study.

Ethical Procedures

Approval was obtained with the 27/01/2023 dated and 2023/1294 numbered decision of the Social and Human Sciences Ethics Committee of Ondokuz Mayıs University to apply the scales and collect the data in the study.

FINDINGS

Table 1. Frequency and percentage distribution of the participants in terms of demographic characteristics

Demographic Characteristics		n	%
Gender	Female	108	52.9
	Male	96	47.1
	Total	204	100.0
The state of doing sports	Yes	139	68.1
	No	65	31.9
Sports type	Individual sports	67	32.8
	Team sports	72	35.3
	Not engaged in sports	65	31.9
The state of being an elite athlete	Yes	82	40.2
	No	122	59.8

As can be seen from Table 1, 52.9% of the high school students in the study are female, 47% are male, 68% are engaged in sports, 31.9% are not engaged in sports, 35.3% are engaged in individual sports and 40.2% are elite athletes.

Table 2. Covid-19 Awareness Status of Individuals in terms of gender

	Gender	n	x	SD	p
Hygiene	Female	108	53.03	5.63	.004
	Male	96	51.52	8.10	
Distance	Female	108	18.69	5.19	.050
	Male	96	18.26	5.88	
Mask	Female	108	17.25	4.16	.280
	Male	96	16.30	4.47	

As can be seen from Table 2, Covid-19 awareness of participants was evaluated in hygiene, distance and mask sub-dimensions in terms of gender variable. According to this evaluation, no statistically significant difference was found in terms of mask and distance sub-dimensions ($p>0.05$). However, hygiene sub-dimension showed a statistically significant difference, with the mean score of female students being higher than that of male students.

Table 3. Covid-19 Awareness Status of Individuals in terms of the state of doing sports

	State of doing sports	n	x	SD	p
Hygiene	Yes	139	52.66	7.089	.991
	No	65	51.56	6.552	
Distance	Yes	139	18.46	5.964	.001
	No	65	18.52	4.458	
Mask	Yes	139	16.41	4.894	.000
	No	65	17.64	2.558	

As can be seen from Table 3, Covid-19 awareness of participants was evaluated in hygiene, distance and mask sub-dimensions in terms of the state of doing sports. According to this evaluation, it was found that hygiene sub-dimension did not show a statistically significant difference ($p>0.05$). However, a statistically significant difference

was found in terms of distance and mask sub-dimensions, with higher mean score of students who were engaged in sports than those of the students who were not (p<0.05).

Table 4. Covid-19 Awareness Status of Individuals in terms of the state of being elite athlete

The state of being elite athlete		n	x	SD	p
Hygiene	Yes	82	52.89	7.351	.568
	No	122	51.93	6.627	
Distance	Yes	82	18.14	6.509	.000
	No	122	18.71	4.752	
Mask	Yes	82	15.52	5.626	.000
	No	122	17.66	2.879	

As can be seen from Table 3, Covid-19 awareness of participants was evaluated in hygiene, distance and mask sub-dimensions in terms of the state of being elite. When this evaluation is examined, it can be stated that hygiene sub-dimension did not show statistically significant difference (p>0.05). However, a statistically significant difference was found in terms of distance and mask sub-dimensions, with elite students having higher mean scores than students who were not elite (p<0.05).

Table 5. Covid-19 Awareness Status of Individuals in terms of the type of sport (ANOVA)

	Type of sport	n	x	SD	p
Hygiene	Individual	67	51.94	8.15	
	Team	72	52.92	6.27	.660
	Not engaged in sports	65	52.05	6.28	
Distance	Individual	67	17.90	6.35	
	Team	72	18.75	5.63	.567
	Not engaged in sports	65	18.80	4.40	
Mask	Individual	67	15.39b	5.66	
	Team	72	17.21a	3.91	.003
	Not engaged in sports	65	17.82a	2.44	

As can be seen from Table 5, Covid-19 awareness of participants was evaluated in hygiene, distance and mask sub-dimensions in terms of the type of sport students were engaged in. When this evaluation is examined, it can be stated that hygiene and distance sub-dimensions did not show statistically significant difference (p>0.05). However, it was found that mask sub-dimension showed statistically significant difference (p<0.05).

CONCLUSION and DISCUSSION

This study aimed to build a bridge between the Covid-19 epidemic, which has affected the world, young people's perspectives on the epidemic and their level of awareness, and the importance they attach to masks, distance and hygiene. There have been epidemics and pandemics that have affected humanity many times in the past. For example, the structural similarity of the Covid-19 virus with the SARS-CoV virus and the higher risk of transmission compared to SARS-CoV have led to inferences about the pandemic process (Akyüz et al., 2020). Another aim of the present study was to investigate the change in physical activity levels in high school students during the COVID-19 pandemic restrictions. When the variable of gender was examined, female students were found to have higher scores than male students. It can be seen that female students were more careful about

hygiene than male students. Unlike our study, Kırım et al. (2015) found no significant difference between the total scores of the two genders in their "Evaluation of High School Students' Personal Hygiene and Cleaning Habits in terms of Science Literacy". Likewise, unlike our study, Ermiş et al. (2022) did not report statistically significant difference between men and women in terms of perceived stress levels related to coronavirus. In the study of Demir and Toprak (2020) on the attitudes and behaviours of women related to the virus and daily life during the quarantine due to the Covid-19 virus, it was found that the importance women attached to hand-face and house cleaning increased to protect themselves from the virus. In general, when the literature is examined, it can be said that female students were more sensitive due to the fact that because of their social roles they spent more time at home, they gave more importance to cleaning, they stayed at home and could not leave their daily routines.

In the study, while the hygiene sub-dimension did not show a significant difference in terms of the status of doing sports, distance and mask sub-dimensions were found to show a statistically significant difference, and it was found that the mean score of the students who were not engaged in sports was higher than those who were. The physical contact of the students who are engaged in sports is more. It can be said that students who were engaged in sports were more careless about mask and distance due to the fact that they had higher physical contact and they contacted same materials with other people since gyms are closed environments. Similar to our study, Ağduman (2021)'s study on the examination of athletes' anxiety levels of catching Covid-19 during the pandemic period showed that the anxiety level of athletes engaged in physically contact sports was higher than the athletes of sports branches which did not include physically contact. Considering that the virus spreads much faster when people come into contact with each other, it is understandable that athletes interested in contact sports are more concerned and this study supports our finding. In terms of the state of being an elite athlete, no statistically significant difference was found in hygiene sub-dimension, while a statistically significant difference was found in terms of distance and mask sub-dimensions. Mean score of non-elite students and students not engaged in sports was found to be higher than that of elite students and students who were engaged in sports.

It can be said that elite athletes cannot pay attention to distance and mask due to factors such as acting collectively during competition periods, being in the same environments with other athletes excessively, and the fact that contact is at the forefront due to trainings they do. Again, as can be seen in Ağduman (2021)'s study "Examination of the anxiety levels of athletes for catching Covid-19 during the pandemic", since elite athletes usually work together with a professional team (masseur, physiotherapist, doctor, mentor, assistant coach) even if they are engaged in individual sports, they are not different from team sports athletes. In the present study, anxiety levels for catching Covid-19 was evaluated in professional athletes who do not generally work with a professional team. It has been concluded that the high level of anxiety in athletes who do sports individually at the elite level may be due to the fact that these athletes work with a large support team. When examined in terms of the type of sports performed, no significant difference was found in hygiene and distance sub-dimension, while mask sub-dimension was found to show a statistically significant difference. The fact that there

is more physical contact in team sports due to the branch can be shown as a factor in the emergence of this result. As a result of the study conducted by Yıldız (2020) on elite athletes with the same measurement tool, it was reported that the anxiety of catching Covid-19 in athletes who were engaged in individual sports was higher than that of the athletes who were engaged in team sports.

SUGGESTIONS

Based on the results we have found in the study, it can be recommended for athletes to prefer outdoors more for sports or to disinfect or ventilate indoors frequently; to pay attention to mask, distance and hygiene before and after training; for athletes to pay attention to hand washing or use disinfectant after physical contact; and to train students in schools about Covid-19.

ETHICAL TEXT

This article complies with journal writing rules, publication principles, research and publication ethics, and journal ethics. Responsibility for any violations that may arise regarding the article belongs to the author(s). Ethics committee approval of the article was obtained with 27/01/2023 dated and 2023/1294 numbered decision of the Social and Human Sciences Ethics Committee of Ondokuz Mayıs University.

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