RESEARCH ARTICLE

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# Covid-19 Fear and Compliance with Protective Measures of Students Who Continue Face-to-face Education During the Pandemic

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#### Abstract

**Objective:** This research was conducted to determine the conditions of Covid-19 fear and compliance with protective measures of students who continue face-to-face education.

**Methods:** The research was descriptively conducted between November 12-20, 2020. The universe of the study consisted of secondary and high school students in a province in The eastern black sea region of Turkey, and the sample consisted of 188 students who were reached by the snowball sampling method.

**Results:** In the study, the average score of the Covid-19 fear scale of the students was  $18.88\pm6.66$ . 89.4% of the students said they regularly used masks, 86.7% said they regularly washed their hands and 67.6% said they regularly followed social distance rules. The educational status of the students' fathers ( $\beta$ = -0.314; p = 0.000), their families catching Covid-19 ( $\beta$  = -0.178; p = 0.012), and their anxiety about their families being sick ( $\beta$ = 0.195; p = 0.007) were found to be a significant predictor on the Covid-19 Fear Scale.

Conclusion: In the study, it was determined that most of the students have knowledge about the methods of protection against Covid-19. Students' fears of Covid-19 were found to be moderate. It is recommended that school health nurses increase their awareness by educating students about Covid-19 disease and preventive measures.

Keywords: Covid-19, Fear of Covid-19, Health, Nursing, School, Student

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# **INTRODUCTION**

Covid-19 pandemic is an important public health problem affecting the entire world (1). With the increasing number of cases, Covid-19 has caused various difficulties for both countries and societies (2). One of these difficulties has been experienced in the field of education. According to UNICEF data, 56.6% of the students worldwide (990,324,537) were affected by the pandemic. According to the course of the pandemic, it is seen that schools apply different methods such as closed, partially open, open and interrupting education at the country level (3). Faceto-face education is continued in some countries by evaluating the risk level in the society (4). The first case of Covid-19 recorded in Turkey was observed on March 10, 2020. After the first case was seen, faceto-face education was suspended at all levels on March 16, 2020, and the distance education process started. Face-to-face education started gradually at some grade levels (kindergarten, primary school, middle school and high school) on 21 September 2020. As of November 17, 2020, due to the increase in the number of cases, face-to-face education was suspended again, and the distance education process started at all levels (5).

To minimize the transmission of the virus in schools that continue face-to-face education during the pandemic process, students, teachers, school staff and families should take comprehensive protective measures (1). Students, who have an important place in society, may be exposed to risk in terms of Covid-19 with face-to-face education (6). Studies show that children escape the disease lightly (7,8), and that contamination is minimized when children comply with social distance, masks, and personal hygiene

rules, especially in the school environment (9). In this process, compliance with protective measures in the school environment is very important for the control of the pandemic. Students should follow protective measures such as wearing masks, hand hygiene, and paying attention to social distance rules (3,10).

The reasons such as continued uncertainty about the treatment of Covid-19 in society, an instant increase in case and death rates, and constant news about the pandemic in the media create fear (11). Studies show that mental health of individuals is affected due to the pandemic, and that emotions such as fear, panic, anxiety, stress and hopelessness are experienced (12-15). In the process of a pandemic, fear is an important emotion that activates a person to cope with an existing situation. However, the degree of fear is important. A high level of fear may cause a person's mental health to be negatively affected, and a low fear may cause protective measures to be ignored (16).

Determining the status of students' compliance with protective measures with Covid-19 fears is important for the course of the pandemic in schools. It is stated that determining students' covid-19 fears is especially important in terms of research and applications (12,17). In this context, it is necessary to make great efforts to effectively address the problems that may occur in "emergency" situations such as pandemics that affect the whole world and to avoid the long-term negative effects of these experiences such as anxiety and fear, especially on the psychosocial development of children (15). When the literature is examined, it is emphasized that the studies on students attending school are limited and that evidence should be created by making studies in

this field (18). School health nurses play an important role in preventing and controlling the spread of infectious diseases in the school environment (19). It is important for this study to be conducted by nurses, who are experts in the field of public health, to reveal the current situation and to provide suggestions to school health nurses. This research was conducted to determine the conditions of Covid-19 fear and compliance with protective measures of students who continue face-to-face education during the Covid-19 pandemic.

# Research Questions

- 1. What does the nature of Covid-19 fear of students who continue their education face-to-face during the Covid-19 pandemic process?
- 2. Do the socio-demographic characteristics affect the fear of Covid-19 of the students who continue their education face-to-face during the Covid-19 pandemic?
- 3. What are the mask usage behaviors of students who continue face-to-face education during the Covid-19 pandemic process?
- 4. What is the hand washing behaviors of students who continue face-to-face education during the Covid-19 pandemic process?
- 5. What are the behaviors of students who continue their education face-to-face during the Covid-19 pandemic to obey the social distance rules?

# **METHODS**

This research was descriptively conducted on students who continued face-to-face education during the Covid-19 pandemic in a province in the Eastern Black Sea region of Turkey between November 12-20, 2020. The universe of the study consisted of middle school (5th and 8th grades) and high school

(9th and 12th grades) students who continued face-to-face education during the Covid-19 pandemic. The sampling consisted of 188 students who were reached using the snowball sampling method. The criteria for participating in the research are volunteering, obtaining parental consent, using a web-based smart device, and continuing face-to-face education.

#### Measures

The data of the study were collected using the "Information Form" and "Covid-19 Fear Scale".

Information Form: This form was prepared by researchers in line with the literature (11,12,15,20). The form consists of two parts. In the first part, there are 14 questions that determine the sociodemographic characteristics of the students (age, gender, class, family type, mother education, father education, monthly income level, knowledge about Covid-19, information source, catching Covid-19, family's catching Covid-19, worrying about the family in terms of the illness, thinking that they can be protected from Covid-19 and being knowledgeable about the methods of protection from Covid-19). In the second part, the practices of students on protection methods from Covid-19 were prepared within the framework of mask (14 questions), hand washing (8 questions) and social distance (17 questions) measures (21,22). Questions about protective measures are rated as yes-no-sometimes. After this form was prepared, it was finalized by taking the opinions of 5 experts.

Covid-19 Fear Scale: The scale developed by Ahorsu et al. (2020) was adapted to Turkish by Bakioglu, Korkmaz and Ercan (2020). The scale, consisting of seven questions, is a 5-point Likert (1: Strongly disagree, 5: Strongly agree) type. The scale

consists of one dimension. The scores that can be obtained from the scale range from 7 to 35. The total score obtained from all items of the scale reflects the level of Covid-19 fear experienced by the individual. A high score means experiencing a high level of fear. Cronbach's Alpha value of the scale is 0.88 (23,24). In this study, Cronbach's Alpha value was found to be 0.85.

# The data collection procedures

In this study, data were collected through an online form. The form consists of two parts; the first part includes the consent form, and the second part includes survey questions. In the first section, there is a section containing the consent of the parents of the students. In this section, families of the students were asked to read the informed consent form carefully and fill in the questionnaire for the study of their children, if they found it appropriate. The consent form contained detailed information about the purpose, benefits and process of the study. With the approval of the parents, the students who volunteered to participate in the study were included in the study by answering the questionnaire questions. In this way, the consent of the children and parents who participated in the study and answered the questionnaire questions was obtained. The time given to the participants for each form is approximately 15 minutes. Within the scope of the data protection law, anonymity has been provided, personal data are kept and not shared with second parties.

# Statistical analysis

The data of the study were analyzed in the SPSS 20.0 package program. The compliance of the data to

normal distribution was evaluated with the Kolmogorov-Smirnov Test. The data were evaluated by descriptive statistics (number, percentage, arithmetic mean, standard deviation, minimum and maximum) and linear regression analysis. The significance level in the study was accepted as p<0.05.

### RESULTS

It was determined that the average age of the students was  $13.22 \pm 2.92$  (Min: 10; Max: 18), 60.6%were girls, 16.0% had an extended family, 34.0% had a primary school graduate mother, 28.7% had a university graduate father, and 51.6% had a family whose expenses were equal to the income. It was found that 2.1% of the students had no knowledge of Covid-19, 40.4% were informed by means of television, 2.1% caught Covid-19, families of 30.9% of the students had Covid-19, 77.1% were worried about their family being sick, 93.1% thought that they could protect themselves from the disease and 87.8% had knowledge about prevention methods. The average score of the Covid-19 Fear Scale of the students within the scope of the study was found to be  $18.88 \pm 6.66$  (Min: 7; Max: 35) at a moderate level (Table 1). Students' age, gender, class, family type, mother and father education, monthly income, catching Covid-19, having Covid-19 in their family, worrying about their family being sick, thinking that they can be protected from Covid-19 and having knowledge about protection methods from Covid-19 produces a meaningful relationship with the Covid-19 Fear Scale (R=0.477, R2=0.227, F (12,175) =4.290, p<0.05).

**Table 1.** Distribution of Students' Socio-demographic Characteristics (n=188)

Descriptive Characteristics	X±SD	2.5%			
Covid-19 Fear Scale	18.88±6.66 (Min:7; Max:35)				
Age	13.22±2.92 (Min:10; Max:18)				
		n	%		
Gender	Male	74	39.4		
	Female	114	60.6		
Grade	5	82	43.6		
	8	49	26.1		
	9	6	3.2		
- u -	12	51	27.1		
Family Type	Nuclear Family	149	79.3		
	Extended Family	30	16.0		
	Broken Family	9	4.8		
Mother Education	Not literate	4	2.1		
	Literate	3	1.6		
	Primary School	64	34.0		
	Secondary School	35	18.6		
	High School	44	23.4		
	University	38	20.2		
Father Education	Not literate	1	0.5		
	Literate	3	1.6		
	Primary School	41	21.8		
	Secondary School	38	20.2		
	High School	51	27.1		
	University	54	28.7		
Monthly income	Less income than expenses	54	28.7		
	More income than expenses	37	19.7		
	Income is equivalent to expenses	97	51.6		
Having knowledge about Covid-19	Yes	184	97.9		
	No	4	2.1		
Covid-19 Information Sources	Family	43	22.9		
	Friend	2	1.1		
-	Internet	29	15.4		
	School Staff	5	2.7		
	Healthcare Professionals	14	7.4		
	Social Media	13	6.9		
	Television	76	40.4		
	Other	6	3.2		
Catching Covid-19	Yes	4	2.1		
	No	184	97.9		
Having Covid-19 in the family	Yes	58	30.9		
	No	130	69.1		
Worrying about family getting sick	Yes	145	77.1		
	No	43	22.9		
Thinking that protection from Covid-19 is possible	Yes	175	93.1		
	No	13	6.9		
Being knowledgeable about methods of protection from Covid-19	Yes	165	87.8		
	No	23	12.2		

These characteristics of the students explain 23% of the total variance of the Covid-19 Fear Scale. When the t test results regarding the significance of the regression coefficients were examined, it was found that the students' fathers' educational status ( $\beta$ = -0.314; p = 0.000), their families' catching Covid-19

 $(\beta = -0.178; p = 0.012)$ , and their anxiety about their families' illness  $(\beta = 0.195)$ ; p = 0.007) appear to be a significant predictor on the Covid-19 Fear Scale. The fact that the students' fathers are university graduates reduces their Covid-19 fears 4.6 times, that their families catching Covid-19 decreases their

Covid-19 fears 2.6 times, and the fear for family Covid-19 fears 3.1 times (Table 2). members getting sick with Covid-19 increases their

**Table 2.** Regression Analysis Related to the Prediction of Socio-demographic Characteristics of Students for Covid-19 Fear Scale Scores

	Unstandardized Coefficients		Standardized Coefficients	t	р	95.0% Confidence Interval for B		Collinearity Statistics	
Variable	В	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
Constant	21.894	5.197		4.213	0.000	11.638	32.150		
Age	-0.114	0.294	-0.049	-0.388	0.699	-0.695	0.467	0.274	3.656
Gender	-1.346	0.928	-0.099	-1.451	0.149	-3.178	0.485	0.949	1.054
Grade	1.056	1.684	0.079	0.627	0.531	-2.268	4.380	0.280	3.577
Family Type	2.144	1.131	0.131	1.896	0.060	-0.088	4.377	0.927	1.079
Mother Education	-1.322	1.238	-0.080	-1.068	0.287	-3.766	1.121	0.789	1.267
Father Education	-4.613	1.088	-0.314	-4.240	0.000	-6.761	-2.466	0.805	1.243
Monthly Income	0.935	0.902	0.070	1.037	0.301	-0.845	2.715	0.960	1.042
Catching Covid-19	2.047	3.248	0.044	0.630	0.529	-4.364	8.458	0.888	1.126
Having Covid-19 in the family	-2.562	1.012	-0.178	-2.531	0.012	-4.560	-0.564	0.892	1.121
Worrying about family getting sick	3.081	1.123	0.195	2.744	0.007	0.865	5.297	0.877	1.140
Thinking that protection from Covid-19 is possible	-2.186	1.851	-0.083	-1.181	0.239	-5.840	1.467	0.884	1.131
Being knowledgeable about methods of protection from Covid-19  R = 0.477 R <sup>2</sup> =0.227 F <sub>12,175</sub> =4	-1.844	1.378	-0.091	-1.339	0.182	-4.563	0.875	0.957	1.045

 $R = 0.477 R^2 = 0.227 F_{(12.175)} = 4.290 p = 0.000$ 

In the study, it was found that 89.4% of the students used masks wherever they were not alone and could not maintain social distance, 92.0% used medical masks, 96.8% wore masks to cover their mouth and nose, 55.3% washed their hands before wearing the mask and 27.67% stated that they carried a spare mask with them (Table 3).

In the study, it was found that 86.7% of the students always washed their hands with plenty of water and soap for 20 seconds, 81.4% avoided touching their eyes, nose and mouth with their hands, 84.6% disinfected their hands while entering school building or classroom and 86.7% disinfected their hands while

leaving school building or classroom, and 88.8% avoided touching surfaces that were frequently touched at school (Table 4). In the study, it was found that 67.6% of the students obeyed the social distance rules, 73.9% paid attention to keeping at least 1 meter distance from others while going to school, 75.0% while going home from school, 78.7% while entering the school building, 78.2% while leaving school, 79.8% in the common places of school, 77.7% during transportation to school, 76.6% in the classroom and 78.2% paid attention to always staying at home when they were not at school (Table 5).

# **Covid-19 Fear and Compliance with Protective Measures of Students**

Table 3. Distribution of Students' Characteristics Regarding the Use of Masks  Mask Usage Characteristics		n	%
	Yes	168	89.4
Do you wear a mask wherever you are not alone and cannot maintain social distance?	No	7	3.7
	Sometimes	13	6.9
	Yes	173	92.0
Oo you use a medical mask all the time?	No	5	2.7
you use a medical mask an die time:		10	5.3
	Sometimes		
	Yes	154	81.9
Oo you always hold the strings when putting on and taking off your mask?	No	7	3.7
	Sometimes	27	14.4
	Yes	182	96.8
Oo you wear your mask so that it covers the mouth and nose completely?	No	1	0.5
to you wear your mask so that it covers the mount and nose completely.	Sometimes	5	2.7
	Yes	8	4.3
Oo you touch the inner surface of your mask after putting it on?	No	155	82.4
	Sometimes	25	13.3
	Yes	104	55.3
Oo you always wash your hands before putting on your mask?	No	19	10.1
or you arways wash your hands before putting on your mask.	Sometimes	65	34.6
	Yes	153	81.4
Oo you always wash your hands after removing your mask?	No	10	5.3
	Sometimes	25	13.3
	Yes	135	71.8
Before putting on your mask, do you disinfect your hands if you cannot wash them?	No	17	9.0
refore parang on your mass, do you distincet your names it you cannot wash them:			
	Sometimes	36	19.1
	Yes	151	80.3
after removing your mask, do you disinfect your hands in case you cannot wash your hands?	No	10	5.3
	Sometimes	27	14.4
	Yes	172	91.5
Oo you replace your mask with a new one when it gets wet, moist and dirty?	No	2	1.1
by you replace your mask with a new one when it gets wet, moist and unity?			
	Sometimes	14	7.4
	Yes	181	96.3
Oo you always throw your mask into the trash when it gets dirty?	No	4	2.1
	Sometimes	3	1.6
	Yes	19	10.1
On you amon your moods while amorging and coupling?	No	155	82.4
Oo you open your mask while sneezing and coughing?			
	Sometimes	14	7.4
	Yes	125	66.5
Oo you always carry a spare mask with you?	No	11	5.9
	Sometimes	52	27.7
	Yes	176	93.6
Do you keen your enem meek in a clean and dry place?			
Oo you keep your spare mask in a clean and dry place?	No	8	4.3
	Sometimes	4	2.1
ble 4. Distribution of Students' Handwashing Characteristics			
Iand Washing Characteristics		n	%
G = 0.00000 00000	Yes	176	93.6
No you wash your hands often?		1 / 0	
Oo you wash your hands often?	No	1	0.5
	Sometimes	11	5.9
	Yes	163	86.7
o you always wash your hands with soap and water for 20 seconds?	No	-	-
- -	Sometimes	25	13.3
	Yes	171	91.0
When you cannot wash your hands, do you disinfect them with hand sanitizer?	No	6	3.2
Then you cannot wash your nanus, uo you dishineet them with hand samuzer?			
	Sometimes	11	5.9
	Yes	153	81.4
Oo you avoid touching your eyes, nose and mouth with your hands?	No	7	3.7
·	Sometimes	28	14.9
	Yes	159	84.6
to you disinfect your hands every day when entering the school building or classroom?	No	12	6.4
o you distinct your names every day when entering the school building of classioon!			
	Sometimes	17	9.0
	Yes	163	86.7
o you disinfect your hands every day when leaving the school building or classroom?	No	12	6.4
	Sometimes	13	6.9
	Yes	167	88.8
	1 08		
			3.2
To you avoid touching surfaces that are frequently touched in schools (such as door handles, stair	No	6	
Oo you avoid touching surfaces that are frequently touched in schools (such as door handles, stair		15	8.0
Do you avoid touching surfaces that are frequently touched in schools (such as door handles, stair	No		
To you avoid touching surfaces that are frequently touched in schools (such as door handles, stair andrails, electric switches)?	No Sometimes Yes	15 12	8.0 6.4
Do you avoid touching surfaces that are frequently touched in schools (such as door handles, stair handrails, electric switches)?  Do you touch the handrails and walls while using the stairs at school?	No Sometimes	15	8.0

Table 5. Distribution of Students' Characteristics Related to Social Distance Rules

Social Distance Rules		n	%
	Yes	127	67.6
Do you always follow the social distance rules?	No	8	4.3
	Sometimes	53	28.2
	Yes	139	73.9
Do you make sure that there is at least 1 meter distance between you and people when you go to school	No	9	4.8
from home?	Sometimes	40	21.3
	Yes	141	75.0
When going home from school, do you pay attention to keeping at least 1 meter distance from people?	No	9	4.8
when going nome from school, do you pay attention to keeping at least 1 meter distance from people:	Sometimes	38	20.2
When entering the school building, do you make sure that there is at least 1 meter distance between you	Yes	148	78.7
and other students?	No	8	4.3
	Sometimes	32	17.0
Do you pay attention to keeping a distance of at least 1 meter from other students when leaving the school	Yes No	147	78.2
building?		11	5.9
		30	16.0
Do you pay attention to keeping a distance of at least 1 meter from other students in the common areas of	Yes	150	79.8
the school (such as corridor, garden, canteen, meeting room)?	No	9	4.8
the school (such as corndor, garden, canteen, meeting room)?		29	15.4
Do you always sit at the same table in class?	Yes	151	80.3
	No	13	6.9
	Sometimes	24	12.8
	Yes	132	70.2
Do you always sit in a diagonal seating arrangement in the classroom?	No	30	16.0
,	Sometimes	26	13.8
	Yes	144	76.6
Do you make sure that you are at least 1 meter away from other students and teachers in the classroom?	No	12	6.4
bo you make sure that you are at least 1 meter away from other students and teachers in the classroom:	Sometimes	32	17.0
	Yes	9	4.8
Do you speak loudly and shouting in class?	No	145	77.1
Do you speak loudly and shouting in class?		34	18.1
	Yes Yes		
		10	5.3
Do you play games that require contact with your friends during breaks?	No	151	80.3
	Sometimes	27	14.4
	Yes No	162	86.2
Do you regularly air your classroom during breaks?		1	0.5
		25	13.3
Do you exchange food, drinks and equipment with your friends?		9	4.8
		149	79.3
		30	16.0
	Yes No	46	24.5
Do you enter other classrooms, teachers' rooms and administration rooms at the school?		111	59.0
		31	16.5
D	Yes	146	77.7
Do you make sure that there is at least 1 meter distance between you and people in transportation to the school (such as school buses, public transportation)?		23	12.2
		19	10.1
	Yes	2	1.1
Do you go to school when you have problems such as fever, cough, respiratory distress?		177	94.1
		9	4.8
	Yes Yes	147	78.2
When you are not at school, do you always make sure that you stay home?	No	10	5.3
men you are not at senoot, ao you arways make saile that you stay nome:	Sometimes	31	16.5
	Sometimes	JI	10.3

# **DISCUSSION**

The findings of the study conducted to determine the fear of Covid-19 and the compliance with protective measures of students who continue their education face-to-face during the Covid-19 pandemic are discussed in this section in line with the literature. It was found that the Covid-19 Fear Scale mean scores of the students within the scope of the study were moderate. Similarly, Gencer (11), Duman (20),

Lorca et al. (25), Reznik et al. (26) and Doshi et al. (27) found that Covid-19 fear was moderate. However, in a study conducted with university students after the Covid-19 Outbreak in China, it was determined that 0.9% of the participants experienced intense anxiety symptoms, 2.7% moderate anxiety symptoms and 21.3% mild anxiety symptoms (12). On the other hand, in the studies conducted by Ahorsu

et al. (2020) and Sakib et al. (2020), it was determined that fear was high (23,28). In children, prolonged exposure to stress factors such as fear of infection, disappointment and boredom. insufficient information, lack of face-to-face contact with friends and teachers and lack of personal space in the home environment, direct and indirect consequences of financial losses of family affect mental health (15). People may be afraid because Covid-19 is contagious and deadly, and the disease does not have a proven treatment or vaccine. It is stated that one of the mental health problems experienced in school-age children against the pandemic is fear (29). Similar to the literature, in our study, it is seen that the fear of Covid-19 in students is at a moderate level.

In the study, it was found that the education status of students' fathers, students' concerns about their families having the illness and about their families being sick were a significant predictor of the Covid-19 Fear Scale. It was found that students' fathers' being a university graduate reduced their fear of Covid-19 by 4.6 times, the illness of their families reduced Covid-19 fears 2.6 times, and their fear of family members being sick increased their fear of Covid-19 3.1 times. In a study conducted by Mertens et al. (30) to determine the predictors of Covid-19 fear, it was found that gender, being knowledgeable about the disease, and worrying about the illness of loved ones affected fear but having the disease did not. Doshi et al. (27) stated that the fear of Covid-19 was higher in women, married people and people with low education levels. Perz et al. (17) stated that there was a positive relationship between anxiety and fear of Covid-19 in university students. Soraci et al. (28) and Sakib et al. (31) stated that there was a

relationship between the Covid-19 fear scale and anxiety about the disease. Duman (20) stated that the loss of relatives due to illness affected the fear of Covid-19. Bakioglu et al. (24) stated that the illness of one of his relatives did not affect the fear of Covid-19. Cao et al. (12) stated that having a disease in family or close relatives increased anxiety, living in the city center, family income and living with the family reduced anxiety. Gencer (11) stated that gender, age and marital status affected the fear of Covid-19 and educational status did not. Gritsenko et al. (32) stated that gender affected the fear of Covid-19 and Broche-Pérez et al. (33) stated that the fear of Covid-19 was 3.13 times higher in women. In our study, it was found that fathers' being more effective on students due to the patriarchal structure of the Turkish society is important for the fact that Covid-19 fears of the students whose fathers are university graduates are low. It was also seen that fathers' high education status positively affected the financial status and social security of families, and students believed that they would receive treatment in better conditions in case of an illness. It was also thought that the better awareness of the students, whose fathers had high education status, of the disease and protective measures decreased the Covid-19 fears. In case of a family member's pulling through the illness, it is thought that learning techniques to cope with Covid-19 is effective in reducing the Covid-19 fears and in case of anxiety for family members being sick increasing the Covid-19 fears, it is thought that students have a fear due to the risk of infecting their loved ones.

When the applications of students for protective measures were examined in the study, it was seen that

89.4% used masks wherever they were not alone and could not maintain social distance, 92.0% used medical masks, 96.8% wore masks to cover their mouths and noses, 86.7% always washed their hands with plenty of water and soap for 20 seconds. 81.4% stated that they avoided touching their eyes, noses, and mouths with their hands, 67.6% stated that they always obeyed the social distance rules and 78.2% stated that they always paid attention to staying at home when they were not at school. Similarly, in a study conducted by Dardas et al. (34) on Jordanian adolescents, it was reported that majority of the adolescents exhibited effective protective behaviors to prevent Covid-19 from spreading. On the other hand, in a study conducted by Chen et al. (35) on primary school students, it was found that 42.05% of the children showed good hand washing behavior and 51.60% showed good mask wearing behavior. In schools, it is very important for students to comply with social distance rules, to wear a mask to cover the mouth and nose, and to comply with personal protective measures such as washing their hands with water and soap for at least 20 seconds in terms of preventing contamination in Covid-19 disease (3,10). In our study, it is seen that most of the students obey protective measures similar to the studies conducted on adolescents.

### Limitations

This study contains some limitations. This study was conducted on students of 5th, 8th, 9th and 12th grades who continued face-to-face education with the approval of the Ministry of Education in Turkey in the Covid-19 pandemic process. Therefore, research results represent these classes. In addition, due to the increase in cases in Turkey, face-to-face education

was suspended in all classes shortly after this study began to be implemented. Therefore, the small number of students in the study sample is an important limitation in terms of generalizability of the results.

# **CONCLUSIONS**

In the study, it was found that the students' Covid-19 fears were moderate. It was found that the students' fear of Covid-19 was predicted by their fathers' education status, their families catching the illness, and their anxiety about their families being sick. In the study, it was determined that most of the students paid attention to masks, hand washing and social distance rules at school, and some did not. In line with these results, to prevent the transmission and spread of Covid-19 disease, it is important for school health nurses to provide training in cooperation with families on protective measures for students, to inform students about the disease and to increase their awareness, taking into account the students who do not comply with protective measures. At the same time, it is important that school health nurses provide mental support for students to cope with the fear of Covid-19. In addition, taking into account the prevalence of social media use among young people, informative content and applications about Covid-19 should be included on the internet and various social media platforms

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