

**EXAMINATION OF COVID-19 FEAR LEVELS OF PHYSICAL
EDUCATION AND SPORTS TEACHERS IN TERMS OF
CONVENTIONAL EDUCATION AND ONLINE EDUCATION:
A TURKEY CASE**

**BEDEN EĞİTİMİ VE SPOR ÖĞRETMENLERİNİN COVID-19 KORKU
DÜZEYLERİNİN GELENEKSEL EĞİTİM VE ONLINE EĞİTİM
AÇISINDAN İNCELENMESİ: TÜRKİYE ÖRNEĞİ**

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Ece AYZAZ KANAT

Muğla Sıtkı Koçman University, Graduate School of Health Sciences, Muğla, Turkey

Orcid: 0000-0002-1738-1706

Ayşegül Funda ALP

Kocaeli University, Faculty of Sport Sciences, Kocaeli, Turkey

Orcid: 0000-0003-4764-4797

Examination of Covid-19 Fear Levels of Physical Education and Sports Teachers in Terms of Conventional Education and Online Education: A Turkey Case

ABSTRACT

The aim of this research is to examine the Covid-19 fear levels of physical education teachers teaching through various educational applications such as online, conventional, and co-education in different institutions such as public and private schools during the Covid-19. A total of 273 teachers participated in the study. The study data was collected through The Fear of Covid-19 Scale. Since the data showed normal distribution in the analyses done through the SPSS 25.0 package program, one of the parametric methods, t-test for pairwise cluster comparisons in independent groups was applied, and one-way analysis of variance was applied in comparisons of more than two clusters. As a result of the analysis, no significant difference the participants' Covid-19 fear levels regarding the variables of the institution, catching covid-19, losing a relative due to covid, and education type. As for the gender variable, a significant difference was found in favor of female participants. It was concluded in their Covid-19 fear levels that physical education teachers' differences in educational institutions and educational applications did not have any significant.

Key Words: Coronavirus, physical education teachers, fear of covid-19, online education, conventional education

Beden Eğitimi ve Spor Öğretmenlerinin Covid-19 Korku Düzeylerinin Geleneksel Eğitim ve Online Eğitim Açısından İncelenmesi: Türkiye Örneği

ÖZ

Bu araştırmanın amacı, Covid-19 döneminde devlet ve özel okul gibi farklı kurumlarda çevrimiçi, geleneksel ve karma eğitim gibi çeşitli eğitim uygulamalarıyla ders veren beden eğitimi öğretmenlerinin Covid-19 korku düzeylerini incelemektir. Araştırmaya toplam 273 öğretmen katılmıştır. Çalışma verileri Covid-19 Korkusu Ölçeği ile toplanmıştır. SPSS 25.0 paket programı ile yapılan analizlerde veriler normal dağılım gösterdiğinden, bağımsız gruplarda ikili küme karşılaştırmaları için parametrik yöntemlerden biri olan t-testi ve ikiden fazla küme karşılaştırılmasında tek yönlü varyans analizi uygulanmıştır. Analiz sonucunda katılımcıların kurum, Covid-19'a yakalanma, Covid nedeniyle bir yakınını kaybetme ve eğitim türü değişkenlerine ile Covid-19 korku düzeyleri arasında anlamlı bir fark saptanmamıştır. Cinsiyet değişkeninde ise kadın katılımcılar lehine anlamlı bir farklılık bulunmuştur. Beden eğitimi öğretmenlerinin Covid-19 korku düzeylerinde eğitim kurumları ve eğitim uygulamaları arasındaki farklılıkların anlamlı olmadığı sonucuna varılmıştır.

Anahtar Kelimeler: Koronavirüs, beden eğitimi öğretmenleri, covid-19 korkusu, online eğitim, geleneksel eğitim

INTRODUCTION

Pandemics are large-scale epidemic diseases that affect millions of people in more than one country, sometimes spreading worldwide¹. The World Health Organization has defined the Coronavirus pandemic (Covid-19), which occurred in Wuhan, China, towards the end of 2019 and affected the whole world as the sixth public health emergency global². The coronavirus epidemic, which caused the death of millions of people and various health problems on a global scale, caused negative effects in many areas such as fatal health problems, economic and financial loss of employment, interruption of education or difficulties in access to education, and suspension of tourism and sports activities³⁻⁶.

Epidemiological diseases such as coronavirus create psychological problems (anger, psychosis, panic insomnia, depression, anxiety, boredom and trauma) as well as epidemiological problems like other epidemics in the past⁷⁻¹⁰. These negativities might develop into risky health behaviors including increased alcohol and tobacco use, excessive carbohydrate consumption, avoidance of exercise, social isolation; distress reactions such as insomnia, anger, stress, and extreme fear of illness even in unexposed; and mental state that may all include a wide range of community mental health concerns^{11,12}. Another factor among those concerns is fear. Fear arises as a reaction to people's anxiety about their health¹³. There is the state of choosing an appropriate defensive response based on previous experience cues and contextual information that can predict trust or danger when encountering a potential threat¹⁴. Generalization of fear remembering is an adaptive neurobiological process that upgrades survival in complicated and dynamic mediums. Uncertainties such as the suspension of professional activities without prior planning, schools' closure, and the untimely reopening of schools during the Covid-19 pandemic have triggered poor mental health and fear¹⁵. Fear has been one of the most common psychological reactions among people during the current epidemic¹⁶. Education has been negatively affected by fear of epidemic and even unforeseen isolation^{17,18}.

Since March 2020, in the education sector, which is one of the areas affected by epidemic, students, teachers, and parents, their roles have changed with the closure of schools worldwide and the homes' turning into schools. With the opening of schools and the transition to the normalization process, the situation has evolved into a different dimension. For example, current datum suggests that children play a negligible role in Covid-19 transmission. With these new data, teachers fear being infected by children they are in contact with the most, and the fear of transmitting the contagion from work to home has appeared¹⁹. Teachers should consider their students due to their professional responsibilities and their relatives. As an essential part of society, teachers have to cope with their emotional reactions to the epidemic and the responses of parents and students to the epidemic²⁰.

In order to limit the fast infection of epidemic and its burden on the health system, some strategies such as hygienic areas, contactless practices, and quarantine are being developed for the concept of "social distance" globally²¹. The education community, which consists of more than 1.5 billion students, 63 million teachers and many educational support personnel worldwide, has been adversely affected by the quarantine and the closure of schools²². According to the changing situations of the cases, educational institutions conduct online education and part-time conventional education trials, and the uncertainties in this process cause the education to be

interrupted. Teachers are still expected to come to their workplaces except for temporary school closures, in situations where social contacts are often to be avoided to decrease the spread of the epidemic. In the perspective of Covid-19 and education, it is unknown how students, who are the basic elements of education, are affected by the Covid-19 epidemic, what their perspectives are on new education methods, how they see the Covid-19 epidemic, how teachers are affected by this epidemic and how they perceive the new normal²³.

Since the start of the epidemic in November 2019, countless studies have been completed on healthcare professionals examining the impacts of Covid-19 on mental healthiness²⁴⁻²⁷. However, despite their importance and potentially challenging social role in virus outbreaks, teachers' and teachers' epidemic-related fears have not been much addressed in studies during current or previous outbreaks.

In this process, no study was conducted on teachers and physical education classes at the top of the classes with the highest contact with students. In this context, the study aims to determine the epidemic fear situation of physical education teachers who teach in different institutions (private schools and state schools) with different educational applications (online education and conventional education) during epidemic and to examine whether they differ according to some variables. We believe that the results of this research can significantly contribute to education study and the literature, with relation to fear of covid-19 problems in education methods that reflect.

Thus, this research centralized the analysis to these five questions:

1. Are there statistical differences in fear of Covid-19 according to the gender (female or male) for physical education teachers?
2. According to the institution (private school or state school), are there statistical differences in fear of Covid-19 for physical education teachers?
3. According to the status of catching Covid-19, are there statistical differences in fear of Covid-19 for physical education teachers?
4. According to the loss of relatives due to Covid-19, are there statistical differences in fear of Covid-19 for physical education teachers?
5. Are there statistical differences in fear of Covid-19 between conventional and online or both education methods for physical education teachers?

MATERIALS AND METHODS

Participants

This research was established by using the relational monitoring method to understand and, analyze the current situation by examining the fear levels of physical education teachers in state and private schools, who use online and internet-based/online education methods throughout the covid-19 pandemic²⁸. The research participants were reached by the snowball method and an unbiased assignment was provided. The teachers are participating in the research of teachers working only in secondary school. Randomly selected 273 physical education teachers (n=273; Female=161, Male=112) from 35 different provinces of Turkey and from different institutions (private and state schools) and teaching with different education methods (online education and conventional education) participated voluntarily (Table 1. Depiction of Participants' Demographic information). All participants were informed about the study's goals and ensured their voluntary addition through a consent form. Ethical approval was acquired

from Kocaeli University Social Sciences Scientific Research and Publication Ethics Committee with document number E-10017888-200-132893 for the study.

Table 1. Demographic Information About The Participants

Variables		f	%
Gender	Female	161	59.0
	Male	112	41.0
Age	22-30	110	40.3
	31-37	98	35.9
	38-45	48	17.6
	46+	17	6.2
	Undergraduate	226	82.8
Level of education	MA	38	13.9
	PhD	9	3.3
Institution	State school	116	42.5
	Private school/course	157	57.5
Status of Catching Covid-19	Yes	52	19.0
	No	221	81.0
Education Methods	Conventional	34	12.5
	Online	120	44.0
	Both	119	43.6
Loss due to Covid-19	Yes	62	22.7
	No	210	76.9

Data Collection

Google forms were used to gather data in the research and the participants participated in the study through the internet. The datum of the study was gathered using the personal information form and the Fear of Covid-19 Scale.

Personal Information Form: There are questions related to participants' gender, age, education level, institution (state or private school), education method (online education, conventional education, or both), whether being caught by Covid-19 and loss of any relatives due to epidemic outbreak in the form created by the researchers. The Fear of Covid-19 Scale: which was improved by Ahorsu et al. (2020)²⁹, was adapted into Turkish by Satıcı et al. (2020)³⁰, and validity and reliability analyses were made. The seven-item Covid-19 Fear Scale's internal consistency was considered reliable at a good level ($\alpha = .82$). In the study, the Cronbach Alpha coefficient of the scale was found to be .88. Participants indicated their acceptance level with the statements on a five-point Likert-type scale. The statements were "strongly disagree," "disagree," "neither agree nor disagree," "agree," and "strongly agree." The minimum possible score was 1, and the max score was 5. An aggregate score (ranging from 7 to 35) was calculated by summing each item's score. The more heightened the score, the more interpreted the fear of Covid-19²⁹. In addition, for use, direct permission was obtained from the researcher³⁰ who provided the Turkish validity and reliability of The Fear of Covid-19 Scale.

Data Analysis

SPSS 25.0 statistical program was used to evaluate the collected data. First, the normality distribution of the data was examined for statistical analysis. Parametric tests were used as the skewness-kurtosis values were in the accepted range of -2 and +2³¹. Statistics' description, t-test, and one-way analysis of variance (ANOVA) were used in

the study. The level of significance was accepted as $p = 0.05$ in the interpretation of the data.

FINDINGS

In this section, the participants' scores from the Fear of Covid-19 Scale were arranged in accordance with the research questions and presented in tables. The results of the Anova and T-test performed according to the variables were evaluated under the following sub-headings.

Table 2. T-Test Results of Participants' Fear of Covid-19 Scale Scores in Terms of The Gender Variable.

Variable	N	Mean	SD	t	p
Female	161	3,14	,88	5,109	,000*
Male	112	2,59	,87		

* $p < .05$

Participants' Covid-19 fear scale; The results of the t-test according to the variable of gender is shown in table 2. A significant difference was found in the gender variable regarding fear of Covid-19 ($p = .000$, $p < .05$). Considering the findings of the gender variable, what found that the Covid-19 fears level of women was higher than male teachers.

Table 3. T-Test Results of Participants' Fear of Covid-19 Scale Scores in Terms of Institution

Variable	N	Mean	SD	t	p
State school	116	2,80	,89	-1,910	,057
Private school	157	3,01	,92		

* $p < .05$

Participants' Covid-19 fear scale; The results of the t-test according to the variable of institution is shown in table 3. There was no crucial difference in the institution and their fear of Covid-19 ($p = .05$). Although there does not seem to be much difference in the level of fear of Covid-19 according to the institution variable, what found that the Covid-19 fear levels of teachers working in private institutions were higher than in state schools.

Table 4. T-Test Results of Participants' Fear of Covid-19 Scale Scores in Terms of Status Catching Covid-19 Variable.

Variable	N	Mean	SD	t	p
Yes	52	2,87	,86	-,408	,684
No	221	2,93	,92		

* $p < .05$

Participants' Covid-19 fear scale; The results of the t-test according to the variable of status of catching Covid-19 is shown in table 4. There was no crucial difference in the status of catching Covid-19 and their fear of Covid-19 ($p = .68$, $p > .05$). Although there does not seem to be a difference in the level of fear of Covid-19 according to the

Catching Covid-19 variable, it was found that higher than previously caught the Covid-19 fear levels of teachers' non-catch.

Table 5. T-Test Results of Participants' Fear of Covid-19 Scale Scores in Terms of Losses Due to Covid-19 Variable.

Variable	N	Mean	SD	t	p
Yes	210	2,92	,87	,136	,892
No	63	2,90	1,04		

*p<.05

Participants' Covid-19 fear scale; The results of the t-test according to the variable of loss due to covid-19 is shown in table 5. There was no significant difference in losing a relative due to Covid-19 and their fear of covid-19 ($p = .89$, $p > .05$). However, it has been determined that the fear levels of those who lost their relatives due to Covid-19 are higher than those who did not.

Table 6. Anova Test Results of the Covid-19 Fear Scale Scores of the Participant's Education Methods Variable.

Variable	N	Sum of Squares	df	Mean of squares	Mean \pm Sd	f	p
Conventional	34	3,545	2	1,773	3,17 \pm 0,83	2,131	,121
Online	120	224,615	270	,832	2,81 \pm 0,89		
Both	119				2,95 \pm 0,95		

*p<.05

ANOVA test results according to education methods variable of the Covid-19 fear scale scores of the participants are shown in table 6. As seen from the table, what found no significant difference between these variables and fear of Covid-19 ($p = .12$, $p > .05$). Although there does not seem to be much difference in the level of fear of Covid-19 according to the education methods variable, the highest level of fear was seen in conventional education, followed by hybrid education and online education, respectively.

DISCUSSION

In the study conducted to examine whether there was a difference in the fear levels of physical education and sports teachers who experienced the epidemic process, regarding the variables of gender, education method, the status of catching Covid-19 and loss due to Covid-19, the following results have been achieved.

In the study, no significant difference was found between the Covid-19 fear levels of physical education and sports teachers and the variables of the institution, the status of catching Covid-19, and losing a relative due to Covid-19 ($p > 0.05$). However, examining the averages it was concluded that the level of Covid-19 fear of those who worked in private schools was higher scores than those who worked in public schools, those who were married than those single. Also deduced that averages of scores of those who did not smoke than more smokers, those who lost a relative due to Covid-19 than those who did not lose. The high level of fear of physical education teachers working in private schools was like the literature. The updated report published in September by the Education Reform Initiative (2021)³² stated that the differences in the institutions where teachers worked and in their legal status were reflected in their

Covid-19 experiences. In a study conducted by the Öğretmen Akademisi Vakfı (Teacher Academy Foundation)³², the teachers, who were negatively affected by the workload during the epidemic were found to mostly work at private schools. This situation was associated with the fact that teachers working at state schools "had relatively secure working conditions" in the results of the research. Similarly, the high level of fear of physical education and sports teachers working at private schools in the present study can be associated with private school teachers' being obliged to stay at school more due to commercial concerns and having a high potential for contact with students.

As for the gender variable, who found a crucial difference in favor of women in the level of fear of Covid-19. Similarly, there was a significant difference in favor of women in a study conducted with teachers and instructors in a state high school in Mexico on fear of Covid-19.³³ Researchers stated that this result was expected as even if there was no pandemic, women showed higher levels of social anxiety symptoms than men and were recognized with psychological diseases more frequently.³⁴ In another study examining the psychological reflections of Covid-19 and ways of coping with the epidemic, it was seen that the scores of women were higher than men in terms of Covid-19 Fear Scale scores³⁵. It was found out in previous studies that women's anxiety about Covid-19 and fear of being infected³⁶ and Covid-19 fear scores were higher than men's^{15,37}. The determinations of the current investigation support those studies in the literature.

No crucial difference was found between the Covid-19 fear levels of physical education and sports teachers and the variable education method in the study ($p>0.05$). In a study investigating the emotional reactions of teachers in Denmark to Covid-19 and the relationship between Covid-19 crisis management and mentioned reactions, no crucial difference was found in the fear of contagion among age groups²⁰. It was also found that teachers had similar fear scores with health workers unlike other occupational groups³⁸. It could be inferred from those findings that physical education teachers working in the field might have developed awareness about the pandemic. Therefore, there was no difference in Covid-19 fear levels regarding education methods. However, further studies are strongly suggested.

The highest level of fear was seen in the conventional education variable, followed by hybrid education and online education, respectively. These results were predicted due to the transmission of the virus through contact.

Another study reported that teachers who fear pandemics were more probably experienced psychological distresses, which almost leads to post-traumatic stress disorder³⁹. To sum up, the teachers with high levels of fear are regarded to experience psychological negativities (such as lack of motivation and burnout). For this reason, it is crucial to organize preventive interventions and provide the necessary psychological support, especially for groups with high levels of fear (such as women and private school workers).

Limitations and recommendations for future research

This research is limited to physical education teachers only, and in further studies, it can be expanded by including teachers from other branches and increasing the number of participants. Various perspectives can be developed by comparison

between branches in this way. Physical education teachers from 35 different provinces of Turkey join in the present study, and other studies to be carried out can be varied on a provincial basis. The research is limited to teachers working in secondary school only and can be included at other levels in future studies. The research was conducted only by applying the Covid-19 Fear Scale. Further studies can be diversified by correlation studies using scales with different parameters.

The obscurities created by the Covid-19 pandemic affect all education stakeholders. In order to cope with these ambiguities, studies should be carried out evaluated by the authorities, and arrangements in the field of education should be made accordingly.

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