Anxieties of secondary school students during distance learning in COVID-19 pandemic

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Abstract

As a result of increasing COVID-19 cases all over the world, schools continued to provide education distantly since the beginning of 2020. This immediate shift is considered as both a factor of anxiety and an area of anxiety. This study aims to investigate the underlying reasons of anxieties among secondary school students with regard to five dimensions: health-related issues, technological opportunities, domiciliary conditions, course-related issues and privacy-related issues. A survey design was adopted. The research was carried out with participation of 156 secondary school students of a state school in Istanbul. Data was collected through the Anxiety Sources Questionnaire in Distance Education developed by the researchers. The underlying reasons of anxiety of secondary school students is presented under five categories. The results revealed that students were mainly concerned about face-to-face exams; problems related to devices; isolation; their inefficiency to learn the content and sharing their private settings.

Keywords: Anxiety; COVID-19 pandemic; Distance education; Secondary school students.

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Introduction

Covid-19 pandemic which started in December 2019 has spread through the World in a short time and World Health Organization (WHO) has declared global pandemic in March 2020 (WHO, 2020). Pandemic has affected economics, education, social life and, of course, health, thus, brought along a new concept as "new normal". According to WHO (2020), the challenge through Covid-19 is mostly in the social life strategies. These strategies asked for a new life style in every country. In Turkey, "Life Fits Home" was the motto which involved staying at home, minding the social distance, wearing a mask, caring sanitization, obeying the outdoor schedules, isolation in short. This, of course, put a burden on society (Karakaş, 2020).

Education was also affected by the pandemic, and according to UNESCO (2020), 188 countries shut down schools by April 2020. At the beginning of the pandemic, this shut down was considered to be a short term but through the increase in cases, there started distance learning. Many countries were in distance learning rather unprepared, what is more, difference between the socio-economic groups' circumstances and digital literacy levels, brought new challenges (Özer, 2020). Özer & Suna listed the challenges as inequalities in;

- home conditions regarding socio-economic status
- parents' education levels
- awareness in distance learning
- digital literacies
- evaluation and assessment standards (2020).

Conceptual Framework

UNESCO stated that countries needed to be prepared for four fields of education to overcome the inequalities as technology, content, pedagogy and follow up (2020). However, Turkish Ministry of Education regarded that student would need a support for their well-being and prepared psycho-social support programs (Özer, 2020). The program covered support manuals for shareholders as students, teachers and parents. As expected, Sirem & Baş (2020) pointed that student were found to be feeling bad and lonely; bored and anxious through the pandemic. Çiçek & Almalı (2020), on the other hand, stated that inefficient information about how long the pandemic will last or where it will head to, increased the anxiety among people. Anxiety is a basic human emotion consisting of fear and uncertainty characterized by feelings of tension, worried thoughts and physical changes (APA, 2013a; Sarason, 1988), and it can be a state or trait based on its duration (Tuncay & Uzunboylu, 2010).

Research on previous global diseases shows that pandemic-related anxiety may intensify anxiety, health anxiety, general stress, post-traumatic stress, and suicidality (Lee et al., 2020). Urgent isolation enforcements, on the other hand, may be an effective way of protection from pandemic and avoiding pandemic-related anxiety. Milman, Lee & Neinmeyer (2020) reveals that coronavirus anxiety may decrease as social isolation measures intensified. However, long terms of isolation, social isolation particular, is closely associated with mental illnesses including social anxiety disorder (Meltzer et al., 2013). Teo, Lerrigo & Rogers (2013)'s research shows that social isolation may *lead* to social anxiety disorder.

Related Research

Wheaton et al (2012) emphasized that pandemic illnesses can easily be associated with high levels of anxiety and compensatory behavior. Research they carried revealed that anxiety is a function of how likely and how serious an illness is perceived to be. Similarly, much research has emphasized the increase of anxiety in individuals during pandemic periods (Çölgeçen & Çölgeçen, 2020; Göksu & Kumcağız, 2020; Memiş Doğan & Düzel, 2020). It should be expected that students living through a social psychological or physical trauma carry an increased anxiety (Allen, Rowan & Singh, 2020; Lischer

& Dickson, 2021). However, Jegede and Kirkwood (1994) had looked into students' negative feelings toward the top three factors affecting distance learning as content of study materials, finance, and readiness and said that, apart from the problems a distance learner faces with finding time and space to work quietly, the distance from resource centers like libraries and study centers, the feeling of isolation, or the inability to attend residential school could pose serious disadvantages in general (1994).

Distance education alone may be an important source of anxiety. Anxiety changes usual thought process of individuals and causes a passive approach to learning material and unwillingness to learn (Tuncay & Uzunboylu, 2010). While the mode of delivery has not much effect on university students' anxieties (Massey et al, 2012), lower grade students who experience distance learning for the first time may have much higher anxiety levels (Horzum & Çakır, 2012). Today's distance education practices mostly rely on computers and the Internet. Any problems experienced with these technologies during online classes may cause student anxiety including computer anxiety, internet anxiety and test anxiety; eventually making students uneasy to talk in virtual groups, communicate with the teacher and peers, and deal with these technologies, thus, negatively affecting the ability to learn through distance education practices (Connolly, Jones & O'Shea, 2005; Rehab, 2021; Tuncay & Uzunboylu, 2010).

Purpose of the Study

Understandably, younger students of society are one of the most affected ones from the pandemic, thus, social isolation and distance education. Lee et al (2020) reports that younger individuals have higher coronavirus anxiety than others. Social isolation, on the other hand, may lead to undesirable outcomes such as obesity, violence, drinking and smoking (APA, 2013b; Holt-Lunstad et al., 2010), each of which need attention especially for younger generation. Thus, investigation of anxieties in younger generations during pandemic are essential. The effects of anxiety are well-documented in the literature, however, there is a gap in the literature about the underlying reasons of anxieties of students during pandemic. In this direction, this research tries to investigate the sources of anxieties among secondary school students during Covid-19 pandemic in Turkey.

Methods

Design

This quantitative study adopted a survey design in order to understand the underlying reasons of anxieties in secondary school students who experienced distance learning during Covid-19 pandemic. Adopting a survey design, this research intends to take secondary school students' opinions based on their online learning experiences during pandemic. Data of the study was collected using an online survey platform.

Participants

Participants of the study were secondary school students attending a state school in Büyükçekmece district in İstanbul. A total of 447 students were studying at the school and 156 (F:82, M:74) of them voluntarily participated in the study with the consent of their parents. Participants of the study were 5th to 8th grade students who had experienced online classes at least one semester.

Data Collection Tools and Process

Data of the study were collected using "Anxiety Sources in Distance Learning Survey" that was developed by the researchers. Survey items were prepared and categorized based on the informal interviews with students and teachers of several areas of interests, and informal observations during online classes during pandemic. Face validity and content validity of the survey were ensured after the evaluation of two field experts. After the revisions were made based on expert opinions, latest form of the survey included 9 demographic questions, 5 survey items and one open-ended question. These 5 items correspond to the 5 categories of source of anxiety, which were determined by preliminary observations and interviews with students and teachers from several fields of study in the school.

These categories were (1) health-related issues, (2) technological opportunities, (3) domiciliary conditions, (4) course-related issues, and (5) privacy issues. All of these items were multiple response questions allowing participants mark relevant sources of anxiety listed. The open-ended question also sought other individual sources of anxiety that are not listed in the questions. The survey was delivered to participants via Google Forms on April, 2021.

Data Analysis

In order to reveal the underlying reasons of anxieties of secondary school students, descriptive statistics were used. Percentages and frequencies were presented for each item under five categories.

Results

Characteristics

Participants of the study were 156 secondary school students (F:82, M:74) of different grade levels (n_{5th}:44; n_{6th}:36; n_{7th}:33; n_{8th}:43). 30.8% of the participants reported that income of their family were below 3000 TL while 52.6% were between 3001-6000 TL, 12.8% were between 6001-9000 TL, and 3.8% were above 9000 TL. Most of the students reported that they consistently attended online classes (f:136). 7 participants, and at least one family member of 56 participants had caught coronavirus up to that time, while 26 participants had lost an acquaintance because of coronavirus.

Sources of Anxieties

This study investigates the sources of anxieties of secondary school students under 5 categories: (1) health-related issues, (2) technological opportunities, (3) domiciliary conditions, (4) course-related issues, and (5) privacy issues. Descriptive statistics for each category are given below.

Health-related issues

This category intended to understand the influence of potential coronavirus infection of students or their acquaintances in the future on their anxieties. Participants were asked which conditions would make them anxious during distance education period. Descriptive statistics are given in Table 1.

Table 1. *Health-related anxiety sources*

Source of anxiety	f	%
Having to attend face-to-face exams	76	49.0
Not being able to attend classes because a family member catches Covid-19	69	44.5
My friends' catching Covid-19	67	43.2
Not being able to attend classes because catching Covid-19	66	42.6
My teachers' catching Covid-19	63	40.6
Thought of having health disorders because of sitting positions while attending online classes	52	33.3
High school entrance exam's being face-to-face	47	30.3
Total	**440**	**283.6**

As seen in Table 1, all items related to health seem to cause anxiety in secondary school students at some level. However, the most common source of anxiety is found to attend face-to-face exams (49%), what is more, even though finding place at the bottom of the table, face-to-face high school examination can be seen as the most common source of anxiety (f:47) considering that the number of

8 grader participants of the study (n$_{8th}$:43). Predictably, anxiety stemming from catching or acquaintances' catching coronavirus is found common in secondary school students.

Technological opportunities

Throughout the distance education period, teaching-learning processes were mostly based on Information and Communication Technologies. Therefore, technology-related issues are considered as one of the most important sources of anxiety among secondary school students, thus, possible technology-related experiences were listed under this category. Participants were asked which technological problems they faced during distance education made them anxious. Findings are given in Table 2.

Table 2. *Anxiety sources related to technological opportunities*

Source of anxiety	f	%
Having connection issues and not being able to connect again	100	64.1
Possibility of a malfunction in devices I use to attend online classes	93	59.6
In case of a malfunction, my family do not/cannot afford a new one	55	35.3
Not having internet connection to attend online classes	35	22.4
Not having a device to connect online classes	34	21.8
Sharing the device with my siblings to connect online classes	32	20.5
Not being able to attend online classes because I do not know to use those technologies	18	11.5
Total	**367**	**235.3**

Table 2 shows that the most common technology-related sources of anxiety are potential connection issues and malfunction of devices, which are possibly assisted by the anxiety of inability to replace malfunctioned devices. On the other hand, an important number of participants reported that their anxiety stemmed from not having internet connection (22.4%) and devices to connect (21.8%) representing a more critical scenario.

Domiciliary conditions

During the Covid-19 pandemic, isolation regulations and precautions completely changed the daily routines and learning environments of students. Being obliged to stay at home all the time, attending online classes from an environment shared with other family members, and physical conditions of this environment are considered important sources of anxieties of students. Therefore, participants were asked which conditions they experienced caused anxiety for them. Findings on this category are given in Table 3.

Table 3. *Anxiety sources related to domiciliary conditions*

Source of anxiety	f	%
Always staying at home and not enjoying things I do before	103	66.0
Being more nervous than before and not knowing how to relax	73	46.8
My parents' always checking me when I attend classes in a separate room	53	34.0
Thought of gaining weight because I cannot move adequately during online classes	46	29.5

Not having my own room to attend online classes	35	22.4
Family members' always being in the room I attend online classes	32	20.5
Attending online classes in the same room with my siblings	23	14.7
Family members' watching TV or making noises in the room I attend online classes	20	12.8
Total	**385**	**246.8**

Table 3 points to the psychological interrelations of anxiety probably signaling the lack of joy and pleasure of life mostly stemming from isolation. Most of the participants have difficulty to cope with isolation conditions. An important number of students also seem to lack private space at home and feel uncomfortable with sharing spaces with other members of their family.

Course-related issues

During Covid-19 pandemic, students were exposed to a completely different form of instruction that they were not used to. Communicational routines between teacher and students, and among students changed dramatically as well as delivery modes of subject matter. Thus, participants were asked which conditions made them anxious during online classes. Findings are shown in Table 4.

Table 4. *Anxiety sources related to course environment*

Source of anxiety	f	%
Not understanding the subject matter	105	67.3
Thought of online classes will not be adequate for higher grades	89	57.1
Thought of classes will always be online from now on	88	56.4
Thought of online classes will not be adequate for high school entrance exam	81	51.9
Being not able to ask things I did not understand	71	45.5
Not being able to socialize in breaks	64	41.0
Not being informed when homework are delivered on online platforms (such as EBA)	58	37.2
Thought of not benefiting online classes	52	33.3
Shorter periods of classes	38	24.4
Having online exams	24	15.4
Asking things I did not understand	18	11.5
Ask permission to speak	13	8.3
Total	**701**	**449.4**

As it comes to course-related anxiety, most of the participants seem to fear that they will not learn the subject matter with distant classes and that this will be a drawback for their future stages of education. For most of the students, the situation is more critical because they fear that it will never end.

Privacy issues

Online communication platforms mostly require microphone and camera activation, thus, students have to open them to actively participate in online classes, which consequently means exposing their private lives. Participants were asked which circumstances made them anxious during online classes. Findings are shown in Table 5.

Table 5. *Privacy-related anxiety sources*

Source of anxiety	f	%
Teachers' asking me to open camera	83	53.2
My friends' seeing my home when I open my camera	65	41.7
Thought of my friends' making fun of my physical changes when I open my camera	54	34.6
Teachers' asking me to open microphone	42	26.9
Thought of my friends' making fun of my home when I open my camera	20	12.8
Thought of my friends' making fun of my family when I open my camera	19	12.2
Total	**283**	**181.4**

As seen in Table 5, the main source of privacy-related anxiety seems to be camera-based communication. It is important to note that anxiety stemming from domiciliary conditions may also play an important role for this issue.

Discussion

This study investigates the underlying reasons of anxieties among secondary school students under five categories: health-related issues, technological opportunities, domiciliary conditions, course-related issues and privacy-related issues. The results of the study were rather relevant with the results of research carried out by Lischer & Dickson (2021) in Switzerland with undergraduate students. This similarity itself is an important clue to us on how a pandemic might be global in the sense of erasing country, age or setting factors.

Even though the instruction was maintained distantly during the pandemic, face-to-face exam enforcements caused anxieties among secondary school students. This stems from not only the fear of catching coronavirus but also the fear of their family members' or teachers' catching it, consequently, not being able to attend classes. This result is more likely to fit in pandemic-related anxiety (Lee et al., 2020), and may show that secondary school students perceive coronavirus as a serious and a very likely illness, which accords with the findings of Wheaton et al. (2012).

As it comes to technology-related issues, findings show that technology literacy and technology ownership is less of a concern for secondary school students while short-term problems such as disconnection from internet during online classes, and long-term problems such as malfunction of devices and not being able to replace them appears to be the main reasons of technology-related anxiety. This result can be related to anxiety stemming from distance education, in accordance with the results of Connolly et al. (2005), Rehab (2021) and Tuncay & Uzunboylu (2010).

The results reveal that domiciliary conditions are also important sources of anxieties among secondary school students. Students reported that staying at home all day and not being able to do things they do before made them anxious and nervous, and that they had difficulty to cope with those feelings. This source of anxiety is more associated with social isolation and conforms to Meltzer et al. (2013) associating long terms of social isolation with mental illnesses such as social anxiety disorder. Besides, sharing spaces with other members of family, intertwining of school and home lives, and being

monitored by parents are also found important sources of anxiety among secondary school students regarding domiciliary conditions.

Course-related issues are found one of the most important source of anxieties among secondary school students. They mostly raised concerns about the efficiency and contribution of online classes, interactivity and socialization. This result is considered to be associated with anxiety stemming from distance education, and conforms with Tuncay & Uzunboylu (2010).

Students reported that they felt anxious when teacher asked them to open their camera and microphone during online classes because of undesired physical changes happened during pandemic and socio-economic conditions of the family. In this direction, this privacy-related source of anxiety can be also associated with anxiety stemming from distance education, pandemic and isolation.

Conclusion

This study set out to investigate the sources of anxiety in secondary school students in distance learning carried out during the pandemic in Turkey. 156 students were surveyed on their anxiety sources in distance education carried out. The study was not planned as a representative one, but rather for the interest of researchers, one of whom is Psychological Guidance and Counselling teacher in a secondary school and the other two ICT academicians in a University. The results revealed that students were mainly concerned about face-to-face exams; problems related to devices; isolation; their inefficiency to learn the content and sharing their private settings, which correspondingly surveyed under health, technology, domiciliary, course, privacy.

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