

University Students' Wellbeing and Mental Health during COVID-19: An Online Photovoice Approach

Sedef Ünsal Seydoğulları* 

Abstract

The pandemic has had a multifaceted impact on individuals of all age groups, giving rise to a myriad of psychological challenges and problems. This effect has been particularly pronounced among university students who harbor concerns about their education and future prospects. In these trying times of COVID-19, it is of paramount importance to discern the factors that bolster or impede the mental health and overall well-being of college students. This knowledge serves as the foundation for delivering preventive and interventional support services. The objective of this study was to identify the biopsychosocial, spiritual, and economic factors that either enhance or hinder the lives of students specializing in Islamic sciences during the COVID-19 pandemic. To achieve this, the Online Photovoice (OPV) method was employed. The study engaged 108 participants (68 female and 40 male) from an Islamic Studies Department in Türkiye. The findings revealed 27 factors that facilitated well-being, including elements such as the beauty of nature, positive emotions, and the support of family and relatives. Conversely, 27 factors were identified as non-facilitating, including issues like inadequate planning and communication, confinement indoors, and the experience of negative emotions. Professionals working with college students can leverage these insights to better serve their needs and address the challenges they face. In conclusion, understanding the diverse factors that impact the lives of university students during the pandemic, both positively and negatively, is essential for guiding effective support and intervention strategies. By recognizing these facets, this study provides important implications for promoting the mental health and well-being of students, ensuring a brighter and more resilient future in the face of unprecedented challenges.

Keywords: Online Photovoice (OPV), well-being, mental health, COVID-19 pandemic

Following the first case in Wuhan, China in December 2019, the global COVID-19 pandemic spread rapidly across the world in 2020, causing massive loss of life, physical illnesses that weaken the immune system, and massive socio-economic disruption (Arslan et al., 2021; Doyumğaç et al., 2021; Karademir & Sahan, 2021; Nicola et al., 2020; Subasi et al., 2023; Tanhan et al., 2020). Like other epidemics, wars, and disasters, in addition to physical health effects, the COVID-19 pandemic has had short and long-term psychological effects (Tanhan, 2020; WHO, 2020).

Although the epidemic caused by the virus affects all age groups, it has been reported that it has caused various mental illnesses (Marelli et al., 2020), especially anxiety (Cao et al., 2020; Sahan & Karademir, 2022; Subasi et al., 2023) and depression (Armiyau et al., 2022; Subasi et al., 2023; Wanjie Tang et al., 2020), especially in university students who are worried about the future. During this period, as in other levels of education, measures such as closing university campuses to students and switching to online education, and taking breaks from interacting with people to maintain social distance were interventions that significantly affected university students (Gostin & Wiley, 2020; Ihm et al., 2021; Otanga et al., 2022; Tüm kaya et al., 2021). Living with the family and avoiding being a financial burden for the family were protective factors in this period (Cao et al., 2020; Tanhan, 2020). However,

*Department of Psychology, Düzce University, Düzce, Türkiye

university students' anxiety levels increased (Husky et al., 2020; Liang et al., 2020; Luo et al., 2021; Wang & Zhao, 2020) due to spending more time on the internet (Çiçek et al., 2020; Subasi et al., 2023), being negatively affected by the news and social media (Aydın, 2020), experiencing difficulties adapting to online education (Ozamiz-Etxebarria, et al, 2020) and establishing social relationships via only online education (Altuntaş et al., 2020). With the onset of the pandemic, having to stay at home instead of receiving education in a social environment and the current social isolation have put students in a trapped or claustrophobic mood, and this situation caused stress, anxiety, fear, loneliness and emotional exhaustion, and all these created hopelessness and depressive symptoms both in Türkiye (Genc et al., 2022; Subasi et al., 2023; Tanhan, 2020) and other countries (Armiyau et al., 2022; Otanga et al., 2022; Zhao et al., 2015).

College Students in Türkiye and the Literature Gap for Islamic Sciences College Students

There is a lack of research on the well-being of university students in Türkiye, who are already in a challenging period due to high levels of academic and employment stress and widespread interpersonal, romantic and emotional problems in Türkiye (Genc et al., 2022; Tanhan, 2020). University students experienced many mental health problems during the COVID-19 pandemic period (Doyumğaç et al., 2021; Genç et al., 2021; Subasi, 2023a; Tanhan, 2020; Tanhan et al., 2021). Tanhan and others (2021) used Online Photovoice (OPV) to examine the factors that support and hinder the mental health of counseling students in Türkiye. The researchers identified supporting factors such as family and friends, socializing, spending time in nature, and reading books; and non-supportive factors such as restriction of freedom, psychosocial and spiritual issues, and not being able to meet in person with other people. Many researchers in Türkiye focused on students in specific majors (e.g., counseling, social sciences teaching, classroom teacher) and found spirituality to be one of the most important support systems during the pandemic (Subasi et al., 2023; Tanhan, 2020; Tanhan et al., 2022; Tümkiye et al., 2021). Despite there has been some research in Türkiye focused on non-seminary students' perceptions of distance education or mental health during the COVID-19 pandemic (Doyumğaç et al., 2021; Erpay, 2021; Genç & Gümrükçüoğlu, 2020; Özdemir & Erdoğan, 2021; Tanhan, 2020; Tanhan et al., 2021; Tümkiye et al., 2021; Subasi et al., 2023), has been no research on the perceptions of Islamic sciences students in Türkiye regarding their online/distance education or mental health status during the pandemic period.

Islamic science college students' mental health, however, has been the subject of only a very limited number of studies in Türkiye. These students will be employed in very different positions in Türkiye, and they give utmost attention to spiritual and religious support systems. Therefore, mental health researchers can serve these students and the people these students are going to serve better if conduct research to understand these students' mental health status.

Additionally, there is lack of innovative and collaborative research methods in research conducted to understand these students. As an innovative, collaborative and comprehensive research method, OPV is closing this gap quite effectively. Recently, many researchers have used OPV in different areas including women's perspectives on their sexuality (Ozkan & Tanhan, 2023), close relationships during difficult times (Genc et al., 2022), special education (Öğülmüş et al., 2021), high school students' perception of math (Koç Koca, 2023), mental health in Nigeria (Armiyau et al., 2023), and college students' approach to Tasawwuf (Tanhan & Erin, 2023). However, none of these researchers have used OPV to explore how the Islamic science college students are going through difficult times, especially COVID-19 pandemic.

Theoretical Framework

The theoretical framework of the research consisted of Ecological Systems Theory (EST), Community Based Participatory Research (CBPR), and Online Photovoice (OPV) all together.

Ecological Systems Theory (EST) addresses the multiple factors affecting individuals' lives from a developmental perspective within the context of nested systems (Bronfenbrenner, 1977; Bronfenbrenner & Morris, 2006): the microsystem (one's immediate environment, including home, peers, and school), the mesosystem (interactions between two or more microsystems; for example, school and home interaction), the exosystem (environmental influences not directly related to the individual, such as media or local governments), the macrosystem (cultural, social and institutional influences), and the chronosystem (wars, economic problems, life

events) (Bronfenbrenner & Evans, 2000). The supportive and non-supportive factors for mental health are related to different levels of EST based on previous OPV research (e.g., Armiyau et al., 2022; Doyumğaç et al., 2021; Genc et al., 2022; Tanhan, 2020; Subasi et al., 2023); therefore, EST was used to examine the factors that emerged in this study to have a more comprehensive and contextual perspective.

This research is also informed by CBPR, which is one strategy for addressing mental health related subjects at a more community level with the people from a community for the community (Dari et al., 2023; Hauber-Özer et al., 2021; Subasi et al., 2023; Tanhan, 2020). It refers to collaborative research processes that are carried out in cooperation with the relevant groups, authorities and institutions. Rejecting a top-down approach to addressing community and individual problems, CBPR attempts to go beyond mere research and identification to collectively solve these problems (Call-Cummings et al., 2023; Dari et al., 2019; Tanhan & Strack, 2020). Tanhan and Francisco (2019) conducted CBPR with a group of 118 academics, civil servants, workers, students and their families in the United States to examine the biopsychosocial, spiritual and economic factors that make their lives easier or more difficult. These researchers collaborated with the college students and community members to address related issues from a CBPR perspective.

Similarly, in this current research from a CBPR perspective and the theoretical framework of this study, the author of this paper engaged in active advocacy through collaborating with the Islamic science college students, their professors and some administrators interested in this research. The researcher constructed a WhatsApp group called "CBPR OPV Group to understand Islamic sciences students." The researcher has been collaborating with the group from the beginning of the study as ongoing advocacy for sharing the results with key people (e.g., administrators, seminary faculty and students, mental health professionals, and OPV experts).

The third part of the theoretical framework of this current study is Online Photovoice (OPV). The current researcher used OPV, which is a qualitative research method to collect the students' experiences. Tanhan and Strack (2020) developed OPV based on the traditional photovoice method (Wang & Burris, 1997; see also Call-Cummings et al., 2019). OPV is much more convenient than traditional photovoice in terms of OPV allowing reaching out to many and diverse participants, taking less time, costing less money, saving time both for the participants and researchers, and making research possible even if it is very difficult to be together face-to-face (Call-Cummings & Hauber-Özer, 2021). A fuller discussion of OPV can be found in Tanhan (2020)'s and Tanhan and Strack (2020)'s work in which they, as the developers of the method, explained OPV's advantages in detail compared to traditional photovoice. More detailed information on how OPV was exactly used is provided in the following method section.

The Purpose of the Present Study

In the present study, the researcher focused on the supportive and non-supportive factors for the mental health of college students studying Islamic sciences, which is also known as the seminary or theology faculty. Islamic sciences college students constitute an important segment in Türkiye because they are employed in many different positions from education to administration, including spiritual/religious social services, in many different institutions. Therefore, in this current study, the researcher attempted to fill this gap in the literature, using OPV (Tanhan & Strack 2020) to understand supportive and non-supportive mental health factors for these students in Türkiye. The aim of the researcher was to determine the biological, psychological, social (biopsychosocial), spiritual, and economic factors that support and do not support the lives of students studying Islamic sciences during COVID-19 using the Online Photovoice (OPV) method.

Method

Participants

Participants ($N = 108$; 68 female and 40 male) were students of Islamic Studies at different universities in Türkiye. Participants were recruited using snowball sampling, starting with students in the researcher's CBPR WhatsApp group. One hundred and twenty-six students clicked on the online survey Google form and participated. After removing 16 people who did not give consent and two who gave incomplete answers, 108 (68 female and 40 male) students remained in the final sample. Of the 108, 93 were single and 15 were married. Based on the responses, the age ranged from 20 to 36 years ($M = 23.62$, $SD = 5.40$). In terms of socio-economic status, 34 were low, 64 were middle and 10 were high. 68 participants reported living in a house or flat with a garden and the rest, 40 participants, reported living in a house or flat without a garden. Ethical approval was also received from the Bartın University Ethics Board (date and number: 16.05.2020; 2020-SBB-0098).

Procedures

University students in Türkiye complained about biopsychosocial, spiritual, and economic issues, especially during the initial two years of the COVID-19 pandemic. Tanhan et al. (2021) proposed the use of OPV to understand these issues from participants' own perspectives because OPV allows participants to share their own bodily sensations, feelings, thoughts and behaviors through a comprehensive story and a photo accompanying these rather than participants responding to some quantitative scales or questions. The author identified the literature gap and read published OPV papers to become familiar with how to use OPV to conduct research. Then the researcher obtained ethics committee permission from a university in Türkiye. The researcher then constructed the CBPR OPV WhatsApp group, which was composed of the primary researcher, interested university students who got involved from the beginning of the study, and a few OPV experts.

Data Collection Tools: Online Google Form/Survey

An online Google Form was used to solicit informed consent, collect demographic information, and elicit the participants' supportive and non-supportive factors for their mental health through one single link. This online form/survey included all of the following including OPV videos, OPV written documents, OPV participation procedures, and demographic questions. The researcher and CBPR group shared only this online form/survey link so that all possible participants could see everything through one single link and participate if they wanted to. The research was conducted in Turkish.

Videos, Recorded Voices and Written Documents in the Online Google Form/Survey

In the online Google Forms survey, the researcher used a video to introduce OPV to participants because OPV is a quite new method and providing an option for the participants to learn about OPV is important. The developers of OPV highlight the importance of providing training options for OPV participants (Tanhan, 2020; Tanhan & Strack, 2020). The researcher provided the following two videos in which the main OPV developer (Tanhan, 2020) explains OPV in detail, including its development, utilization, philosophy, and advantages over traditional photovoice. The main developer of OPV provided this detailed information both in English and Turkish¹. The online survey form included published OPV articles so that any interested participants could read more about OPV to get more information about this new method.

The link to the survey was shared on the social media accounts of the people in the CBPR WhatsApp group for this study. The CBPR WhatsApp group facilitated the outreach to more and diverse students. The group allowed the researcher and the group member to inform each other about the process from the beginning of the study and motivated each other to reach out to many and diverse students for participation.

OPV Steps

The researcher followed Tanhan (2020) and Tanhan and Strack (2020)'s protocol for OPV:

Step 1: Participants identify least one and up to ten key supports for their daily life and especially for their mental health.

Step 2: Participants take a photograph of the most important supportive factor.

Step 3: Participants upload the photograph and write a story representing the support factor using the questions below, abbreviated as SHOWED (Tanhan, 2020). The research used SHOWED question in Turkish as adapted to Turkish by Tanhan (2020). The SHOWED questions can be briefly summarized as follows:

S: What do you **see** in the picture representing the support for mental health or daily life for yourself and/or your community?

H: What is **happening** in your photograph?

O: How does the photograph relate to **y(o)ur** life as an Islamic sciences college student and to your community?

W: **What** makes this the most important supportive factor?

E. What did you **experience** feel when taking your photo and writing your story.

¹ the link/ for the OPV introduction in English is: <https://www.youtube.com/watch?v=ArqgA33EMDQ&t=1328s> and link for the OPV introduction in Turkish is: https://youtu.be/_e0imJTtC_Y?si=B1WD6n5D8sog1oaJ

D: What can we as mental health professionals, educators, researchers and students **do** for this subject to improve mental health?

Step 4: Participants provide at least one and at most three phrases to summarize their photos and stories.

Step 5: Participants attribute their supportive factors to Ecological Systems Theory (EST) levels.

First, the participants completed these five steps for supportive factors to their mental health. And then, they followed the same steps for non-supportive factors for their mental health during the COVID-19 pandemic.

Analysis

Data were analyzed by the researcher and a few people (academics and students) involved in this research who have been part of the CBPR group. Online Interpretative Phenomenological Analysis (OIPA) was used to analyze collected data through OPV. Tanhan and Strack (2020) developed OIPA based on traditional Interpretative Phenomenological Analysis (IPA; Smith & Osborn, 2003). OIPA was adapted into Turkish by Tanhan (2020) based on Tanhan and Strack (2020)'s research paper. Some other researchers have also used traditional IPA (Lim & Freeman, 2023) to understand people's experience during the COVID-19 pandemic. However, it seems more and more people from different disciplines have used OIPA recently during the COVID-19 pandemic to capture people's experiences more accurately (Armiyau et al., 2022; Doyumgaç et al., 2021; Genc et al., 2022; Tanhan et al., 2021; Tümkaya et al., 2021). Additionally, some other researchers have also used OIPA for other subjects, including high school students' approach to math (Koç Koca, 2023; Subasi, 2023) and women's perceptions of their own sexuality (Ozkan & Tanhan, 2023).

Considering OIPA's advantages over traditional IPA, the researcher used OIPA to analyze the data. Participants' responses were grouped into themes and subthemes. Data analysis was conducted in five steps: 1) Data were reviewed to identify missing or non-consented data (photo, theme or consent to participate); 2) data were checked for confidentiality; 3) supportive themes and subthemes; 4) non-supportive themes and subthemes were identified; and 5) supportive and non-supportive themes' attributions to EST levels were categorized.

Results

The findings are classified into four sections: 1) mental health supportive factors; 2) mental health non-supportive factors; 3) attribution of supportive and non-supportive factors to EST systems; 4) sharing the results with key people from an advocacy and CBPR perspective.

Mental Health Supportive Factors

Supportive factors were grouped into 27 themes (Table 1). Due to space limitations, the researcher included only a small selection of examples of photographs and stories. The researcher conducted the study in Turkish and the words and expressions in Table 1 and 2 and captions below are the expressions of the participants. OPV developers (Tanhan, 2020; Tanhan & Strack, 2020) suggested not editing participants' words, captions and photos so that their voices, message and contexts are conveyed as the participants wanted to share. The participants' shared words, captions or photos can be edited only if they are totally unclear and out of context (Tanhan, 2020). Therefore, the words, captions and photos shared below were not edited unless they were totally unclear.



Photograph 1. Examples of photos and captions by participant 43

I grow my own crops and watch my seedlings grow in my two hobby gardens. The hobby garden we made with all residents improved our neighborhood relations. Positive thinking makes everything easier. I never thought about what I went through during this time. Thanks to this OPV research, I got an opportunity to think about the situation we are in. Believing that everything will get better no matter what.”

This participant summarized their photo and caption as: “*Against all odds, no matter what*”.

Table 1. Supportive factors for student mental health during COVID-19

Themes: Supports	n	%
1. Nature: Spending time in nature, fresh air, soil, garden, walking, deep breathing, fewer cars and people, campus and living spaces being in touch with nature	36	33
2. Enjoyable feelings: Love, compassion, joy, hope, connection to life, pleasure, happiness, trust, peace, self-confidence, appreciation, celebrating special days with enthusiasm, relaxation, dreaming, gratitude, love	28	26
3. Family and loved ones: Spending time with relatives, children, and mother; helping family	27	25
4. Spirituality, religion: Turning towards Allah, prayer, reciting the Qur'an, memorizing surahs, faith, worship, prayer, getting up early for the morning prayer	26	24
5. Making time for yourself: Hobbies, self-discovery, self-knowledge, self-understanding, relaxation, journal writing, painting, contemplation, sports, painting, watching movies,	25	23
6. Reading books, learning	22	20
7. Being active: Being useful to society and other people, togetherness, support, socializing, being in contact with others	19	18
8. Making money: Working, producing, turning a crisis into an opportunity, setting and pursuing goals, working somewhere, self-improvement, learning a language, working in the field to earn money and contribute to society economically, starting the day early, recycling	18	17
9. Being positive or affirmative: Positive thoughts, avoiding stress, smiling, noticing beauty, thinking positively	12	11
10 Participating in meaningful activities: Psychological counseling, guidance, bibliotherapy, conferences, writing, conversation	12	11
11 Studying: Studying for the exam for government jobs, belief in getting a job, having places to study, being able to study in the small masjid and mosque on campus and in the neighborhood	11	10
12 Buildings and cities: Balconies, gardens, large areas, empty fields, parks and estates near nature	10	9
13 Support and interest of friends	10	9
14 Living in a village or on a farm	9	8
15 Patience, tawakkul	9	8
16 Understanding and supportive people: Teachers, family members, friends	8	7
17 Having a suitable learning environment at home: Separate room, internet, good economic situation	8	7
18 Healthy food and conversation: Family meal, fruit, tea, coffee	8	7
19 Positive experiences from the past: Photos, difficult moments overcome	5	5
20 Taking care of animals	5	5
21 Taking health precautions (masking, distancing, etc.)	5	5
22 Living alone: being alone, avoiding the news	5	5
23 Being mindful	4	4
24 Having plans: Internal discipline, schedule, focusing attention, making good use of time	4	4
25 Technology: computers, computer game, soccer games, gain computer skills	4	4
26 Healthcare workers	4	4
27 Online and distance education	2	2



Photograph 2. Examples of photos and captions by participant 21

“The thing that supported my life the most was Quran. I read it a lot, tried to understand it, tried to engrave it in my heart, memorized about 15 suras in the first 6 months. Memorizing with my family, repeating the memorization with tea and fruit, was something I missed for a long time. The hardest thing was not being able to go out and the feeling that my brain was on fire at home. Always the same room, garden and balcony was very boring. I wish we lived in a modest house with a garden. The fact that people were poor was also very depressing because many people lost their jobs and lost their bread.”

This participant summarized their photo and caption as: *“Quran, memorizing, tea with family, reading Quran with family”*.

Non-supportive Mental Health Factors

Non-supportive factors were grouped into 27 themes (Table 2).

Table 2: Non-supportive factors for student mental health during COVID-19

Main Non-supportive Themes	n	%
1. Lack of planning and communication: Lack of communication, empathy, sincerity and planning among friends, family, teachers; waste of time and effort, lack of understanding, lack of guidance and direction, lack of psychological and social support, negative behavior, waking up too late, people with negative energy,	38	35
2. Being trapped in buildings: being a prisoner, prison, small houses, many siblings and no private rooms	26	24
3. Feeling unpleasant emotions: forced, stuck, no choice, upset, anxious, worried, helpless, sad, fear, tired, getting nothing, fed up, frustrated, angry, sad, feeling unable to handle certain situations, agitated, infected, shock, stunned, stress, depressed, anxiety, fear of death, fear of rebelling against God	24	22
4. Unpleasant situations: stressing about exams, taking exams blindfolded and being asked to recite chapters from Quran from memory, being alone, getting caught up in TV and regretting wasting a lot of time, getting caught up in beautiful scenery and forgetting what needs to be done, dealing with many different problems, the pressure of running out of time, not being able to get your things from the dormitory, not knowing what to do and just staying there, uncertainty, being alone with thoughts, being caught out of the blue, negative thoughts, people acting in a panic, developing an obsession with cleanliness, not being in control	20	19
5. Online education and internet problems: internet problems, not being able to connect to the class, trying to understand and explore alone, not being able to learn, not having a computer, everything being electronic	20	19

6.	Difficulty in studying: school stress, lack of focus, preoccupation with other things, lack of time, pressure to study, lack of suitable study space	19	18
7.	Physical distance: lack of socialization, not being able to get together with friends, not having people to talk to, not finding people to trust	17	16
8.	Economic conditions: not having a car, not getting enough healthy food, having to work, everyone in the household having to work	17	16
9.	Loneliness: not seeing children around, silence, doing everything alone	17	16
10.	Staying away from nature: longing for nature	11	10
11.	Not going to school: longing for school, lack of planning and support from school administrators, lack of solidarity	11	10
12.	Having to do several difficult things at the same time: central exam and school lessons together, not choice but imposition and coercion, life being limited to exams, other obligations of life such as work	10	9
13.	Restriction of freedom	10	9
14.	Problems with family: arguing with family, lack of family awareness, lack of religion and spirituality, slang and swearing, spending too much time with family, living with family	9	8
15.	Mandatory quarantine rules: prohibitions; people not following the rules, masking	9	8
16.	COVID-19: catching the virus, getting sick, losing someone	9	8
17.	Lack of spirituality or religion: lack of prayer in the mosque, Islamic knowledge, patience, prayer, and contemplation	8	7
18.	Meaningless work: not producing meaningful work, products, activities	7	7
19.	Not being able to get together: not being able to hug family, relatives and loved ones, not being able to get together, not being able to get together even on Islamic eids	7	7
20.	The past: going back to the past, longing for past beauties, past difficulties	7	7
21.	Village: missing the village, lack of young people in the village, lack of infrastructure and easy transportation	6	6
22.	Health: health anxiety, lack of doctors, inaccurate medical information, and health services	6	6
23.	Not having time for oneself: not knowing oneself, not knowing how to breathe regularly,	4	4
24.	Not being able to help people, environment, nature	4	4
25.	Excessive time spent on electronic devices: Overexposure to computers and online content, phone addiction, substance abuse, gambling	4	4
26.	Buildings not built for people: concrete houses with no gardens, no proper shopping areas, cities full of garbage and smells, not fit for people	4	4
27.	The difficulty of keeping children at home, depriving children from Islamic eids, not being able to kiss children	3	3



Photograph 3. Examples of photos and captions by participant 8

“Some of our teachers do not understand us at all, some of them were even more brutal. For example, one of them says they will ask direct memorization questions and says, "the exam will be live and with your eyes closed". Come on, how can they do this? :(We are crying as a group. My phone was not smart, it was broken, I could not even send this OPV participation from my phone. I feel anxious and nervous every day. You see, I am alone, and I am constantly studying for the central exam to get a job in the government system. Unfortunately, there is no other job to do in Türkiye. I think the teachers and managers should get up and open a factory, I don't know, they should really do something, and we should take an example... So, what will happen when we do a live exam with our eyes closed...? Then I will forget all the information and then I will be even more angry with them, myself and the system... I think the administrators should really work now. Thank you for opening this chance to express ourselves with this study.”

This participant summarized their photo and caption as: "Produce real work, I'm exhausted with meaningless work".



Photograph 4. Examples of photos and captions by participant 64

"A photo from the mountain or the campus, I don't remember exactly, but this is what we had in common with our friends. Sitting on stones and talking over our petrified hearts. After classes, we were 4 friends. We used to go to the masjid together and pray, and we met with such friends online during the pandemic, we supported each other. But the fact that we couldn't meet face anymore, we couldn't discuss it, it was challenging for us. Therefore, people should be given the opportunity to come together. I wish we had not gone home; it would have been much more productive if we had stayed in a dormitory or rented a house."

This participant summarized their photo and caption as "Moving away from learning from friends and discussions, living with family, family arguments, TV".

Supportive and Non-supportive Factors in EST Systems

Participants were asked to sort the supportive and non-supportive factors they named into to the EST system categories: individual/intrinsic, microsystem, exosystem and macrosystem (Table 3). Each supportive and non-supportive factor could be placed in multiple systems.

Table 3. Supportive and non-supportive factors in EST systems

Themes	EST Levels				
	Intrapsychic	Microsystem	Exosystem	Macrosystem	All together
Supportive	84% (n=91)	78% (n=84)	54% (n=58)	41% (n=44)	34% (n=37)
Non-supportive	72% (n=78)	56% (n=60)	63% (n=68)	77% (n=83)	38% (n=41)

As seen in Table 3, the participants attributed supportive and non-supportive factors for their mental health to different EST systems and also attributed them to all the systems together as well.

Sharing the Results with Key People from an Advocacy and CBPR Perspective

Given the researcher's and CBPR group's commitment to participatory research, they are committed to sharing these results with relevant institutions. Advocacy from a CBPR perspective, which constitutes an important part of the theoretical framework of the research, and reaching relevant institutions and individuals, is of great importance for researchers using the OPV method. In this context, the research results here continue to be shared with the relevant authorities. The CBPR group, including the researcher, has shared the results with a few local government administrators, university administrators, university staff and especially academicians and staff in Islamic sciences faculties in Türkiye. We also shared the results with hundreds of college students in seminary through online/distance courses, face-to-face interaction, and academic meetings. These efforts are ongoing. Positive and negative feedback is being obtained from different key people and institutions.

Discussion

Main Supportive Factors of Mental Health During COVID-19

The supportive factors were categorized into 27 themes. Nature (n=36, 33%) was the most common theme, and participants discussed spending time in nature. The participants meant getting fresh air, stepping on soil, gardening, walking, taking deep breaths in nature, having fewer cars and people, spending time on their university campuses that have many trees and green areas, and living in a house in a natural environment. This finding concurs with similar studies: Tanhan et al. (2021) found that nature was the second most prevalent (31%) supportive factors for counseling students' mental health wellbeing during the pandemic. Tanhan (2020) found that nature was the fourth most prevalent theme (17%) discussed in research on college students' biopsychosocial, spiritual and economic wellbeing and issues; Subasi et al. (2023) again found nature to be the 6th most prevalent theme (8%) for supporting college students to be motivated for their education. Other research has also demonstrated the relaxing effect of nature on human psychology: it reduces stress (Jiang et al., 2014; Slater et al., 2020), makes individuals feel positive emotions (Junot et al., 2017), and increases individuals' life satisfaction and happiness levels (Eigenschenk et al., 2019). Nature is important for gaining direct experience about how ecosystem works and how different living beings sustains their life, and all these improve one's perceptions of the physical environment (Pouya et al., 2014) and enhance one's psychological capacity to enhance one's wellbeing and endure difficult issues (Tanhan, 2020). The healing effects of nature have been found to be quite effective for close relationship as well (Genc et al., 2022). That nature is the most commonly cited supportive factor indicates the importance of spending time in nature and away from the increasingly crowded and difficult city.

The second most prevalent theme was experiencing pleasant emotions (n=28, 26%). Participants described these feelings with words such as love, compassion, joy, hope, being connected to life, pleasure, happiness, trust, peace, self-confidence, appreciation, celebrating special days with enthusiasm, relaxation, dreaming, gratitude, and love. In Tanhan et al.'s (2021) study, counseling students identified similar positive emotions: feeling of calmness, serenity and security were mentioned by 14% of participants, and hopefulness and hope for the future were mentioned by 10% of participants. Similar studies also reported themes of positive perspectives (attending oneself n=42, 33%) (Tanhan, 2020) and benevolence, solidarity and support (n=6, 4%) (Tümkiye et al., 2021).

This theme might be productively understood in relation to mindfulness and emotion management. Emotion management, the process of identifying and distinguishing between positive and negative behaviors, requires people to recognize, direct, adapt, and use emotions effectively. This is made possible by living in the moment and being able to recognize the triggers that distract individuals from their present reality (Cüceloğlu, 2005). That means a conscious awareness of being in the moment is important, especially considering the effect of past experiences on current emotions. Mindfulness is defined by Baer and others (2004) as non-judgmentally or accepting the focus of one's attention on the experience occurring in the present moment. It has been shown to be a successful intervention against depression, anxiety and addiction (Williams & Kabat-Zinn, 2007), and is strongly linked to happiness (Bellin, 2015; Brown et al., 2007). Studies also showed that being "in the moment" during COVID-19 made people's lives easier (Arslan et al., 2020; Çiçek et al., 2020). Being "in the moment" is a protective factor for mental health, not only for university students but also for all people (Tanhan & Francisco, 2019; Tanhan & Strack, 2020; Viskovich & Pakenham, 2020). This is an important factor for people to experience feelings of well-being.

The third theme, which was about as prevalent as the second, was the presence of family and loved ones ($n=27$, 25%). This finding is in line with other OPV studies, which also named family, relatives, friends and close environmental relations (Tanhan, 2020), spending time with family (Tümekaya et al., 2021), supporting family and relationship with friends (Tanhan et al., 2021), and spending time with family, being together and knowing that you are with family (Subasi et al., 2023) as core supportive factors for wellness. Many studies emphasize the importance of family support during COVID-19 (Cao et al., 2020; Genç et al., 2020; Kürtüncü & Kurt, 2020; Otanga et al., 2020). The family is widely recognized as a very core support system in therapies. In societies like Türkiye with a collectivist culture, the family may serve as an even more important source of support (Kağıtçıbaşı, 2014; Tanhan, 2020).

Spirituality and religion ($n=26$, 24%) was the fourth important theme. Participants identified activities that they do in accordance with their religious beliefs such as praying, reading the Holy Quran, memorizing sections, worshipping, and getting up early for morning prayers as supportive for their psychosocial, spiritual and academic life. In Tanhan's (2020) study, spirituality was the third most important factor ($n=23$, 18%) that enriched the lives of the college students who were receiving mental health services at a counseling center during the COVID-19 pandemic in Türkiye. Our results show this to be more significant among Islamic science students in the faculty of theology. Other research demonstrates that religion and fulfillment of religious practices have positive effects on coping with stress (Kavas, 2005; Tanhan & Francisco, 2019) and general wellbeing. Religion functions as a supportive structure (Otanga et al., 2020; Tanhan & Francisco, 2019). Turning to a transcendent power offers security in situations over which people have no control (Joshi et al., 2004), like the pandemic. Due to space limitations, participants' other supportive factors during the pandemic could not be included in detail.

Non-supportive Factors of Mental Health During COVID-19

Twenty-seven main themes capture the factors that made participants' lives difficult during the pandemic. The most common theme was lack of planning and communication ($n=38$, 35%). Participants felt the lack of communication between students and professors made their education and daily life very difficult. The fact that the professors did not act empathetically and did not understand students enough made it very difficult for students to focus on their courses and lives. Students reported struggling to use time well and reported problems related to being late, not receiving adequate guidance, and not receiving adequate psychological and social support.

Tanhan's (2020) study examining facilitators and barriers for mental health and daily life of clients at a college counseling center in Türkiye during the first months of the pandemic found similar problems: a lack of a schedule and unfinished work ($n=6$, 5%) and a lack of empathy in academia ($n=3$, 2%). Other studies of college students and what supported and what did not support them during the pandemic found similar results. Doyumğaç and others (2021) documented a lack of communication ($n=14$, 16%); Tümekaya et al.'s (2021) found a lack of sufficient interaction and incompatibility between teachers and students ($n=10$, 7%); and Subaşı et al. (2023) reported miscommunication and not being understood ($n=4$, 3%) as core themes. Tanhan (2020) found that making a plan/program ($n=5$, 4%) was one of the factors that made students' lives easier is in line with this study's results. Many other studies with similar results can be found in the literature (Eldeleklioğlu, 2008; Mac Cann et al., 2012; Misra & McKean, 2000).

During the pandemic, people experienced major changes to their routines. With the transition to online education, students had to contend with and adapt to a totally new system. Students were thus more in need of guidance and support than ever. Students expected understanding and empathy during this period of adapting to these new realities. Few studies have addressed student problems with time management, lack of empathy from faculty, and insufficient guidance during the COVID-19 pandemic (Doyumğaç et al., 2021; Tanhan, 2020; Tümekaya et al., 2021; Subasi et al., 2023).

The second most common theme expressed by participants was being stuck in their homes and not having private space ($n=26$, 24%). Not having private space due to feeling stuck and feeling as a prisoner, living in small houses, and many people sharing a house made life difficult for the students during the pandemic. Tümekaya et al. (2021) found physical inappropriateness of houses' effect on college students ($n=11$, 7%) and Tanhan (2020) reported students' feeling imprisoned at home ($n=24$, 19%), having crowded family ($n=13$, 10%), and living in concrete buildings far from nature ($n=13$, 10%) hindering the students' mental health status and education.

This current study joins others in documenting people's discomfort in feeling imprisoned at home during quarantine (Arslan et al., 2020; Çiçek et al., 2020). Students want to live in environments and houses that contain components of nature such as gardens, soil, and animals (Özkaral & Bozyiğit, 2020; Tanhan, 2020) and, as noted above, nature has a positive effect on people's well-being.

The third main theme was unpleasant emotions, which were discussed by 22% (n=24) of participants. Participants expressed that they felt stuck and helpless, depressed and anxious. At times, they felt they could not handle certain situations, and they often felt that they did not have any agency. Participants emphasized that unpleasant feelings such as intense anxiety about getting the virus, fear of death, depressive mood, fear of rebelling against Allah (God) were intense during this period. Similar results were found in the literature (Arslan et al., 2020; Çiçek et al., 2020; Haktanır et al., 2020; Subaşı et al., 2023; Tanhan, 2020; Tanhan et al., 2021; Tümkaya et al., 2021; Yakar et al., 2020). These unpleasant feelings, coupled with social isolation, may cause greater problems and even psychopathology over time (Tanhan et al., 2020; Schafer et al., 2022). The other non-supportive themes that emerged in the research are not discussed due to space limitations.

Taken together, these themes capture the factors that helped or hindered Islamic science college students' mental health during the COVID-19 pandemic. Activities such as spending time in nature, family support, experiencing positive emotions, practicing spiritual or religious activities, taking time for oneself, producing and reading books, and having resources for online education had a positive and feel-good function for the participants. On the other hand, situations and obligations such as lack of planning, academic incomprehension, lack of empathy, not receiving adequate guidance and direction, being and feeling stuck at home, experiencing unpleasant emotions and situations, facing technical problems related to distance education, not being able to socialize, being away from nature, having family problems, and experiencing restriction of freedom caused negative emotions and made life difficult for the Islamic science college students. Although the results of this study are similar to the those of other OPV studies about supportive and non-supportive factors for college students' education and mental health, this is the first OPV study focusing on Islamic science (theology) students in Türkiye. These students become employed in many different positions in Türkiye, and lack of mental health research on these students is an important gap. The current study closes a bit of this gap.

Limitations

Participants in this study were not a good representative sample of all theology students, considering the thousands of Islamic sciences college students in Türkiye and the sample of this current study (N=108). Because the study was conducted online and during a limited time frame, only some of the students were able to participate, and they were limited to their experiences of the first periods of the pandemic when the restrictions were very strict. Additionally, it is possible some of the participants did not want to write on a screen due to feeling burned out from looking at electronic tools. Another important limitation could be the researcher not being a faculty member in Islamic sciences faculty, and this could have made it more difficult to reach out to the students.

Implications

This research was conducted with the aim of identifying the supportive and non-supportive factors for Islamic sciences college students' mental health and sharing the results with key people to serve the students and increase their well-being and mental health. Based on these main goals and especially the theoretical framework of the study, the following recommendations can shed light on future research and services.

Implications for Future Research

In this study, the supportive and non-supportive factors for the lives of theology students were examined with using OPV. Similar methods might be used to identify supportive and non-supportive factors affecting students in other departments, especially the relatively more sensitive departments (e.g., kindergarten, special education, departments teaching Turkish language to refugees and immigrants, departments that have many international students). This can serve initiatives to ensure the well-being and mental health of young people. Future research might focus specifically on the problems of disadvantaged groups in society, such as minorities, migrants and people with disabilities, to better lay the foundations for effective measures not only at the individual or academic level, but also at the institutional and practical level. Many researchers have called for working with minority groups and

improving research methods to capture minority groups' experiences (Armiyau et al., 2022; Dari et al., 2021; Hauber-Özer & Call-Cummings, 2020; Subasi, 2023b; Tanhan, 2020; Waegh et al., 2023). A final call can be conducting OPV research with students under 18 years of age because all of the OPV published research are conducted with people at the age of 18 or older.

Implications for Mental Health Professionals

Understanding the factors that affect university student wellness can support mental health professionals in university counseling centers in providing better therapeutic interventions for their clients during such difficult times, especially when it is very difficult to get out. For example, the effect of nature, which is among the most important supportive factors in this study, on people's positive emotions can be utilized: therapy gardens and nature walks, for example, can be suggested to students. Practicing mindfulness exercises, opening space for enjoyable feelings and positive emotions were important to students' well-being. Mental health professionals can benefit from working with students should emphasize mindful activities and practices related to being in the moment. Additionally, mental health providers can utilize Acceptance and Commitment Therapy (Arslan et al., 2021; Çiçek et al., 2021; Tanhan, 2019; Uğur et al., 2020; Uğur et al., 2021; Viskovich & Pakenham, 2020) to create space for enjoyable and difficult feelings, thoughts, and sensations and integrate present moment awareness activities.

Stress, anxiety, depressive mood, hopelessness, helplessness, and loneliness are emotions that students are likely to experience in such difficult times when students are not allowed to get their education on campus, spending time outside and not being able to socialize with their friend. The stressors that cause these negative feelings should be addressed professionally. For example, anxiety may be largely caused by lack of planning and problems in time management, a theme that emerged at a high rate in this study. Mental health professionals can emphasize time management and planning with their clients. The effects of excessive use of technology should be discussed with clients, and protective measures can be suggested, such as engaging in diverse activities and incorporating meaningful activities into their lives.

Implications for Educators

Among the most prominent challenges participants faced during the pandemic was poor communication with professors, lack of empathy from professors, and inadequate support from professors. If educators make an effort to understand the perspectives of their students and show necessary empathy and support, it may be possible for online education, which involves various difficulties for both parties, to be more effective and comfortable. Our results suggest that students need strong and empathic guidance from their educators. Educators need to provide students with personal, social and educational guidance as well as academic information.

Implications for Active Interdisciplinary Social Advocacy

Since this research uses CBPR and EST as part of the framework for this study, one needs to be mindful of the contextual conditions in which individual wellbeing exists and be committed to positive change across systems and scales. At the institutional level, our research emphasizes the importance of economic conditions to wellbeing. It also suggests that increasing green spaces in cities that would have positive effects on students and others. Key people and administrators can collaborate with Islamic science students, their professors, mental health professionals and people interested in these emerged supportive and non-supportive themes to enhance supportive factors and address non-supportive ones more effectively and functionally.

Compliance with Ethical Standards

Ethical Standards

All study procedures involving human participants followed institutional and/or national research committee ethical standards and the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Ethical approval was also received from the Bartın University Ethics Board (date and number: 16.05.2020; 2020-SBB-0098).

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Received: June 11, 2023

Accepted: October 14, 2023

Published Online: October 22, 2023

References

- Aydın, A. F. (2020). Post-truth dönemde sosyal medyada dezenformasyon: Covid-19 pandemi süreci, *Asya Studies* 4, 12, 76-90. <https://doi.org/10.31455/asya.740420>
- Altuntaş E. Y. vd., (2020). COVID–19 pandemisi sürecinde üniversite öğrencilerinin yükseköğretim kurumlarının uzaktan eğitime yönelik stratejilerine ve öğrenme deneyimlerine ilişkin algı düzeyleri, *Halkla İlişkiler ve Reklam Çalışmaları E-Dergisi* 3, 2, 8-23.
- Armiya’u, A. Y., Yildirim, M., Muhammad, A., Tanhan, A., & Young, J. S. (2022). Mental health facilitators and barriers during Covid-19 in Nigeria. *Journal of Asian and African Studies*. <https://doi.org/10.1177/00219096221111354>
- Arslan, G., Yıldırım, M., Tanhan, A., Buluş, M., & Allen, K. A. (2021). Coronavirus stress, optimism-pessimism, psychological inflexibility, and psychological health: Psychometric properties of the Coronavirus Stress Measure. *International Journal Of Mental Health And Addiction*, 19, 2423-2439. <https://doi.org/10.1007/s11469-020-00337-6>
- Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. *Assessment*, 11, 3, 191-206. <https://doi.org/10.1177/1073191104268029>
- Bellin, Z. J. (2015). The meaning connection between mindfulness and happiness. *The Journal of Humanistic Counseling*, 54(3), 221-235. <https://doi.org/10.1002/johc.12013>
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32(7), 513–531. <https://doi.org/10.1037/0003-066X.32.7.513>
- Bronfenbrenner, U., & Morris, P. A. (2006). *The bioecological model of human development*. *Handbook of child psychology*. CANADA: John Wiley & Sons, Inc
- Bronfenbrenner, U., & Evans, G. W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development*, 9(1), 115–125. <https://dx.doi.org/10.1111/1467-9507.00114>
- Brown, K. W., Ryan, R. M., & Creswell, J. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry*, 18(4), 211–237. <https://doi.org/10.1080/10478400701598298>.
- Call-Cummings, M., Dazzo, G., & Hauber-Özer, M. (2023). *Critical participatory inquiry: An interdisciplinary guide*. SAGE Publishing.
- Call-Cummings, M., Hauber-Özer, M., Byers, C., & Mancuso, G. P. (2019). The power of/in Photovoice. *International Journal of Research & Method in Education*, 42(4), 399–413. <https://doi.org/10.1080/1743727X.2018.1492536>
- Call-Cummings, M., & Hauber-Özer, M. (2021). Virtual photovoice: Methodological lessons and cautions. *The Qualitative Report*. <https://doi.org/10.46743/2160-3715/2021.4971>
- Cao W. vd. (2020). The psychological impact of the COVID-19 epidemic on college students in China”. *Psychiatry Research* 287. <https://doi.org/10.1016/j.psychres.2020.112934>
- Cufta, M. (2016). Stres ve dini inanç. *Pamukkale Üniversitesi İlahiyat Fakültesi Dergisi*, 5, 50-70.
- Cüceloğlu, D. (2005). *Başarıya götüren aile*, İstanbul, Remzi Yayınevi.
- Çiçek, I., Tanhan, A., & Buluş, M. (2021). Psychological inflexibility predicts depression and anxiety during COVID-19 Pandemic. *i-Manager's Journal on Educational Psychology*, 15(1), 11. <https://doi.org/10.26634/jpsy.15.1.18198>
- Dari, T., Chan, C., & Del Re, J. (2021). Integrating culturally responsive group work in schools to foster the development of career aspirations among marginalized youth. *Journal for Specialists in Group Work*, 46(1), 75–89. <https://doi.org/10.1080/01933922.2020.1856255>

- Dari, T., Fox, C., Laux, J. M., & Speedlin Gonzalez, S. (2023). The Development and Validation of the Community-Based Participatory Research Knowledge Self-Assessment Scale (CBPR-KSAS): A Rasch Analysis. *Measurement and Evaluation in Counseling and Development*, 56(1), 64-79. <https://doi.org/10.1080/07481756.2022.2034478>
- Dari, T., Laux, J. M., Liu, Y., & Reynolds, J. (2019). Development of community-based participatory research competencies: A Delphi study identifying best practices in the collaborative process. *The Professional Counselor*, 9(1), 1-19. <https://doi.org/10.15241/td.9.1.1>
- Doyumğaç, İ., Tanhan, A., & Kiyamaz, M. S., (2021). Understanding the most important facilitators and barriers for online education during COVID-19 through online photovoice methodology. *International Journal of Higher Education*, 10(1), 166-190. <https://doi.org/10.5430/ijhe.v10n1p166>.
- Eldeleklioğlu, J. (2008). Ergenlerin zaman yönetimi becerilerinin kaygı, yaş ve cinsiyet değişkenleri açısından incelenmesi. *İlköğretim Online*, 7(3), 1-8.
- Erpay, İ. (2021). Zorunlu uzaktan eğitim: covid-19 pandemisi sürecinde ilahiyat öğrencilerinin uzaktan eğitime yönelik görüşleri. *Marifetname*, 8, 1, 169-204. <https://doi.org/10.47425/marifetname.935536>
- Genç, M. F., & Gümrükçüoğlu, S. (2020). Koronavirüs (Covid-19) sürecinde ilâhiyat fakültesi öğrencilerinin uzaktan eğitime bakışları. *Electronic Turkish Studies*, 15(4), 403-422. <https://dx.doi.org/10.7827/TurkishStudies.43798>
- Genc, E., Tanhan, A., & Kose, O. (2022). Exploring the facilitators and barriers to maintaining intimate relationships during Covid-19 through online photovoice methodology. *Journal of Family Issues*. <http://dx.doi.org/10.1177/0192513X221113855>
- Genç, E., Turhan, Z., & Tanhan, A. (2021). Koronavirüs salgın sürecinde ve afet dönemlerinde psikolojik destek hizmeti: aile-odaklı psikolojik müdahale programı. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi*, 8, 4, 203-222.
- Gostin, L. O., & Wiley, L. F. (2020). Governmental public health powers during the COVID-19 pandemic: stay-at-home orders, business closures, and travel restrictions. *Jama*, 323(21), 2137-2138. <https://doi.org/10.1001/jama.2020.5460>
- Eigenschenk, B., Thomann, A., McClure, M., Davies, L., Gregory, M., Dettweiler, U., & Inglés, E. (2019). Benefits Of Outdoor Sports For Society. A Systematic Literature Review And Reflections On Evidence, *International Journal Of Environmental Research And Public Health*. 16(6), 937. <https://doi.org/10.3390/ijerph16060937>
- Haktanir, A., Seki, T., & Dilmaç, B. (2020). Adaptation and evaluation of Turkish version of the fear of COVID-19 scale. *Death Studies*, 1-9. <https://doi.org/10.1080/07481187.2020.1773026>
- Hauber-Özer, M., & Call-Cummings, M. (2020). Empowerment or exposure? Ethical dilemmas of visual methods with vulnerable migrants. *Qualitative Research Journal*, 20(3), 329-340. <https://doi.org/10.1108/QRJ-10-2019-0075>
- Hauber-Özer, M., Call-Cummings, M., Hassell-Goodman, S., & Chan, E. (2021). Counter-storytelling: Toward a critical race praxis for participatory action research. *International Journal of Qualitative Studies in Education*, 36(6), 1175-1190. <https://doi.org/10.1080/09518398.2021.1930252>
- Husky, M. M., Kovess-Masfety, V., & Swendsen, J. D. (2020). Stress and anxiety among university students in France during Covid-19 mandatory confinement. *Comprehensive Psychiatry*, 102, 152-191. <https://doi.org/10.1016/j.comppsy.2020.152191>
- Ihm, L., Zhang, H., Van Vijfeijken, A., & Waugh, M. G. (2021). Impacts of the Covid-19 pandemic on the health of university students. *The International Journal of Health Planning and Management*, 36(3), 618-627. <https://doi.org/10.1002/hpm.3145>
- Jiang, B., Chang, C. Y., & Sullivan, W. C. (2014). A dose of nature: Tree cover, stress reduction, and gender differences. *Landscape and Urban Planning*, 132, 26-36. <https://doi.org/10.1016/j.landurbplan.2014.08.005>
- Junot, A., Paquet, Y., & Martin-Krumm, C. (2017). Passion For Outdoor Activities And Environmental Behaviors: A Look At Emotions Related To Passionate Activities, *Journal Of Environmental Psychology*, 53, 177-184. <https://doi.org/10.1016/j.jenvp.2017.07.011>
- Kağıtçıbaşı, Ç. (2014). Kültürleşme ve aile ilişkileri. *Türk Psikoloji Yazıları*, 17(34), 120-127.
- Karademir, Ç., & Şahan, B. (2021). Türkiye'de Covid-19 pandemisinin psikososyal etkileri ve akılcı duygusal davranışçı terapinin ABC modeli çerçevesinde incelenmesi. *Kocaeli Üniversitesi Eğitim Dergisi*, 4(2), 416-439. <https://doi.org/10.33400/kuje.951888>

- Koç Koca, A. (2023). Understanding mathematics perception through drawing: An Online Interpretative Phenomenological Analysis (OIPA) study. *International Journal of Education and Literacy Studies*, 11(4). *Manuscript in print*.
- Kürtüncü, M., & Kurt, A. (2020). COVID-19 pandemisi döneminde hemşirelik öğrencilerinin uzaktan eğitim konusunda yaşadıkları sorunlar. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi*, 7(5), 66-77.
- Liang, J., Cui, X., & Yu, Z. (2020). Investigation on mental health status of nursing students during COVID-19 epidemic. *Journal of Heilongjiang University of Technology*, 20, 1-4.
- Lim, M. L. H., & Freeman, G. (2023). Mothers' wellbeing during COVID-19 in Singapore: An interpretative phenomenological analysis. *Journal of Happiness and Health*, 3(2), 1-22. <https://doi.org/10.47602/johah.v3i2.34>
- Luo, W., Zhong, B. L., & Chiu, H. F. K. (2021). Prevalence of depressive symptoms among Chinese university students amid the COVID-19 pandemic: a systematic review and meta-analysis. *Epidemiology and Psychiatric Sciences*, 30, e31, 1-21. <https://doi.org/10.1017/S2045796021000202>
- Mac Cann, C., Lipnevich A. A., Burrus J., & Roberts R. D. (2012). The best years of our lives? Coping with stress predicts school grades, life satisfaction, and feelings about high school. *Learning and Individual Differences*, 22, 235-241.
- Misra, R., & McKean, M. (2000). College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies*, 16(1), 41-51.
- Marelli, S. vd. (2020). Impact of COVID-19 lockdown on sleep quality in university students and administration staff. *Journal of Neurology*, 268/1.
- Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., ... & Agha, R. (2020). The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *International Journal of Surgery*, 78, 185-193. <https://doi.org/10.1016/j.ijssu.2020.04.018>.
- Ozamiz-Etxebarria, N., Dosil-Santamaria, M., Picaza-Gorrochategui, M., & Idoiaga-Mondragon, N. (2020). Stress, anxiety, and depression levels in the initial stage of the COVID-19 outbreak in a population sample in the northern Spain. *Cadernos de Saude Publica*, 36. <https://doi.org/10.1590/0102-311X00054020>
- Otanga, H., Tanhan, A., Musili, P. M., Arslan, G., & Buluş, M. (2022). Exploring college students' biopsychosocial spiritual wellbeing and problems during COVID-19 through a contextual and comprehensive framework. *International Journal of Mental Health and Addiction*, 20(1), 619-638. <https://doi.org/10.1007/s11469-021-00687-9>
- Ozkan, N., & Tanhan, A. (2023). Kadınların cinselliğe bakışının Online Seslifoto (OSF) ile incelenmesi [Women's perspectives of sexuality through Online Photovoice (OPV)]. *Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Dergisi*, 24(2), 194-229. <https://doi.org/10.17494/ogusbd.1110733>
- Öğülmüş, K., Acikgoz, M. H., & Tanhan, A. (2021). Evaluation of teacher candidates' perceptions about specific learning difficulties through Online Photovoice (OPV) methodology. *International Journal of Education and Literacy Studies*, 9(2), 161-169. <http://dx.doi.org/10.7575/aiac.ijels.v.9n.2p.161>
- Özdemir, Ö., & Erdoğan, İ. (2021). Covid-19 pandemisi sürecinde İlahiyat fakültesi öğrencilerinin uzaktan eğitim hakkındaki görüşleri. *Türkiye Din Eğitimi Araştırmaları Dergisi*, 12, 11-41. <https://doi.org/10.53112/tudear.999869>
- Özkaral, T. C., & Bozyiğit, R. (2020). Coğrafya ve sosyal bilgiler öğretmen adaylarının "çarpık kentleşme" kavramına yönelik metaforik algıları. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi*, 7(5), 389-405.
- Pouya, S., Şafak, P., & Demirel, Ö. (2014). *Engelli çocuklar için iyileştirme (terapi) bahçeleri*. 24. Ulusal Özel Eğitim Kongresi.
- Schafer, K. M., Lieberman, A., Sever, A. C. & Joiner, T. (2022). Prevalence rates of anxiety, depressive, and eating pathology symptoms between the pre- and peri-COVID-19 eras: A meta-analysis. *Journal of Affective Disorders* 298, 364-372. <https://doi.org/10.1016/j.jad.2021.10.115>
- Slater, S. J., Christiana, R. W., & Gustat, J. (2020). Peer Reviewed: Recommendations for keeping parks and green space accessible for mental and physical health during COVID-19 and other pandemics. *Preventing Chronic Disease*, 17, 1-5. <https://doi.org/10.5888/pcd17.200204>

- Smith, J. A., & Osborn, M. (2003). Interpretative phenomenological analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to methods* (pp. 51–80). London: Sage.
- Subasi, Y. (2023a). College belonging among university students during COVID-19: An Online Interpretative Phenomenological (OIPA) Perspective. *Journal of Happiness and Health*. <https://doi.org/10.47602/johah.v3i2.52>
- Subasi, Y. (2023b). Öğretmenlerin Covid-19 sonrası sürecini Online Seslifoto (OSF) yöntemiyle anlamak. *EKEV Akademi Dergisi*, Manuscript under review.
- Subasi, Y., Adalar, H., Tanhan, A., Arslan, G., & Allen, K., Boyle, C., Lissack, K., Collett, K., & Lauchlan, F. (2023). Investigating students' experience of online/distance education with photovoice during COVID-19. *44(3)*, 563-587. <https://doi.org/10.1080/01587919.2023.2227140>
- Sahan, B., & Karademir, Ç. (2022). Perceived Stress and Psychological Well-Being in Adult Individuals during COVID-19: The Mediating Role of Coping Strategies. *Turkish Psychological Counseling and Guidance Journal*, *12(67)*, 558-578. <https://doi.org/10.17066/tpdrd.12250133>
- Tang, W., Hu, T., Hu, B., Jin, C., Wang, G., Xie, C., ... & Xu, J. (2020). Prevalence and correlates of PTSD and depressive symptoms one month after the outbreak of the COVID-19 epidemic in a sample of home-quarantined Chinese university students. *Journal of Affective Disorders*, *274*, 1-7. <https://doi.org/10.1016/j.jad.2020.05.009>
- Tanhan, A. (2019). Acceptance and commitment therapy with ecological systems theory: Addressing Muslim mental health issues and wellbeing. *Journal of Positive Psychology and Wellbeing*, *3(2)*, 197-219. <https://journalppw.com/index.php/jppw/article/view/53>
- Tanhan, A. (2020). COVID-19 sürecinde Online Seslifoto (OSF) yöntemiyle biyopsikososyal manevi ve ekonomik meseleleri ve genel iyi oluş düzeyini ele almak: OSF'nin Türkçeye uyarlanması. [Utilizing Online Photovoice (OPV) methodology to address biopsychosocial spiritual economic issues and wellbeing during COVID-19: Adapting OPV to Turkish.] *Turkish Studies*, *15(4)*, 1029-1086. <https://doi.org/10.7827/TurkishStudies.44451>
- Tanhan, A., Arslan, G., Yavuz, F., Young, J. S., Çiçek, İ., Akkurt, M. N., ... & Allen, K. A. (2021). A constructive understanding of mental health facilitators and barriers through Online Photovoice (OPV) during COVID-19. *ESAM Ekonomik ve Sosyal Araştırmalar Dergisi*, *2(2)*, 214-249. <https://dergipark.org.tr/en/pub/esamdergisi/issue/64932/956618>
- Tanhan, A., & Erin, A., (2023). Online Seslifoto (OSF) yöntemiyle üniversite öğrencilerinin tasavvuf anlayışını keşfetmek [Exploring college students' perception of tasawwuf through Online Photovoice (OPV) methodology]. *Iğdır Üniversitesi Sosyal Bilimler Dergisi*; Manuscript in print.
- Tanhan, A., & Francisco, V. T. (2019). Muslims and mental health concerns: A social ecological model perspective. *Journal of Community Psychology*, *47(4)*, 964-978. <https://doi.org/10.1002/jcop.22166>
- Tanhan, A. & Strack, R. W. (2020). Online photovoice to explore and advocate for Muslim biopsychosocial spiritual wellbeing and issues: Ecological systems theory and ally development. *Current Psychology* *39*, 2010-2025. <https://doi.org/10.1007/s12144-020-00692-6>
- Tanhan, A., Yavuz K. F., Young, J. S., Nalbant, A., Arslan, G., Yıldırım, M., Ulusoy, S., Genç, E., Uğur, E., & Çiçek, İ. (2020). A proposed framework based on literature review of online contextual mental health services to enhance wellbeing and address psychopathology during COVID-19. *Electronic Journal of General Medicine*, *17(6)*, em254. <https://doi.org/10.29333/ejgm/8316>.
- Tull, M. T. vd. (2020). Psychological outcomes associated with stay-at-home orders and the perceived impact of COVID-19 on daily life". *Psychiatry Research*, *289*, 113098. <https://doi.org/10.1016/j.psychres.2020.113098>
- Tümkeya, S., Kayıran, B. K., Tanhan, A., & Arslan, Ü. (2021). Using Online Photovoice (OPV) to understand youths' perceptions of distance education during COVID-19. *International Journal of Education and Literacy Studies*, *9(4)*, 45-60. <https://dx.doi.org/10.7575/aiac.ijels.v.9n.4p.45>
- Uğur, E., Kaya, Ç., & Tanhan, A. (2021). Psychological inflexibility mediates the relationship between fear of negative evaluation and psychological vulnerability. *Current Psychology*, *40(9)*, 4265-4277. <https://doi.org/10.1007/s12144-020-01074-8>
- Viskovich, S., & Pakenham, K. I. (2020). Randomized controlled trial of a web-based Acceptance and Commitment Therapy (ACT) program to promote mental health in university students. *Journal of Clinical Psychology*, *76(6)*, 929-951. <https://doi.org/10.1002/jclp.22848>

- Waegh, R. D., Teaurere, R., Orams, M., & Lück, M. (2023). Online photovoice to engage indigenous Cook Islands youth in the exploration of social and ecological wellbeing amidst a global disruption. *Frontiers in Sustainable Tourism*, 2. <https://doi.org/10.3389/frsut.2023.1172034>
- Wang, C., & Burris, M. A. (1997). Photovoice: Concept, methodology, and use for participatory needs assessment. *Health Education & Behavior*, 24(3), 369-387.
- Wang, C., & Zhao, H. (2020). The impact of COVID-19 on anxiety in Chinese university students. *Frontiers in Psychology*, 11, 1168. <https://doi.org/10.3389/fpsyg.2020.01168>
- Williams, J. M. G., & Kabat-Zinn, J. (2007). *The mindful way through depression: Freeing yourself from chronic unhappiness*. New York, NY: Guilford Press.
- World Health Organization (2020). *Coronavirus disease (Covid-19) advice for the public*. Geneva: World Health Organization.
- Yakar, B., Kaygusuz, T. Ö., Pirinçci, E., Önalın, E., & Ertekin, Y. H. (2020). Knowledge, attitude and anxiety of medical students about the current COVID-19 outbreak in Turkey. *Family Practice and Palliative Care*, 5(2), 36-44. <https://doi.org/10.22391/fppc.737469>
- Zhao, X., Selman, R. & Haste, H. (2015). Academic stress in Chinese schools and a proposed preventive intervention program. *Cogent Education* 2,1-14. <https://doi.org/10.1080/2331186X.2014.1000477>